

# Appendix D

## Agency Comments from Final Programming Screen

Published 10/06/08

## ETDM Programming Screen Summary

			Evaluation of Direct Effects																				
			Natural										Cultural			Community							
Legend			Air Quality	Coastal and Marine	Contaminated Sites	Farmlands	Floodplains	Infrastructure	Navigation	Special Designations	Water Quality and Quantity	Wetlands	Wildlife and Habitat	Historic and Archaeological Sites	Recreation Areas	Section 4(f) Potential	Aesthetics	Economic	Land Use	Mobility	Relocation	Social	Secondary and Cumulative Effects
ETAT Review Period: 6/30/2008 - 8/14/2008. Published: 10/6/2008																							
Alternative #1 (EIS Alt. 1C) From Crosstown Pwy and Manth Lane to US 1 at Village Green Drive			0	4	3	0	4	0	3	5	4	5	5	3	4	3	2	2	3	1	3	4	4
Alternative #2 (EIS Alt. 2A) From Crosstown Pwy and Manth Lane to US 1 at Walton Road			0	4	3	0	4	0	3	5	4	5	5	3	4	3	2	2	3	1	4	4	4
Alternative #3 (EIS Alt. 2D) From Crosstown Pwy and Manth Lane to US 1 at Walton Road			0	4	3	0	4	0	3	5	4	5	5	3	4	3	2	2	3	1	4	4	4
Alternative #4 (EIS Alt. 6A) From Crosstown Pwy and Manth Lane to US 1 at Savanna Club Blvd			0	3	3	0	4	0	3	4	4	4	4	3	4	3	2	2	3	1	4	4	4
Alternative #5 (EIS Alt. 6B) From Crosstown Pkwy and Manth Lane to US 1			0	4	3	0	4	0	3	5	4	5	5	3	4	4	3	2	3	1	4	4	4
Alternative #6 (EIS Alt. 1F) From Crosstown Pkwy and Manth Lane to US 1			0	4	3	0	4	0	3	5	4	5	5	3	4	4	3	2	3	1	4	4	4
Degree of Effect Legend																							
			Legend																				
Color Code	Meaning		ETAT										Public Involvement										
N/A	Not Applicable / No Involvement		There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.										No community opposition to the planned project. No adverse effect on the community.										
0	None (after 12/5/2005)		The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect is new as of 12/5/2005.										No community opposition to the planned project. Minimum adverse effect on the community.										
1	Enhanced		Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.										Affected community supports the proposed project. Project has positive effect.										
2	Minimal		Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.										Minimum community opposition to the planned project. Minimum adverse effect on the community.										
2	Minimal to None (assigned prior to 12/5/2005)		Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.										Minimum community opposition to the planned project. Minimum adverse effect on the community.										
3	Moderate		Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.										Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.										
4	Substantial		The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.										Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.										
5	Potential Dispute (Planning Screen)		Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.										Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.										
5	Dispute Resolution (Programming Screen)		Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.										Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.										
	No ETAT Consensus		ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.																				
	No ETAT Reviews		No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.																				

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1. Alternative 1/1c

A. Natural

i. Air Quality

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality)

b. U.S. Environmental Protection Agency

**Degree of Effect:** 0 None

**Comments:**

Based on data available, no significant impact on air quality has been identified.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality)

ii. Coastal and Marine

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 12.0 acres of coastal wetlands, 2.4 acres of natural river, and 684.9 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. For these reasons and based on agency comments, a Summary DOE of Substantial has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*).

Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mullet (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with

the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gillmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977).

Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation).

Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors. The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 2) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 3) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project

description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, the 500-foot project buffer contains one Super Act Risk Source; six FDEP regulated and unregulated storage tanks, and four RCRA-regulated facilities. No geocoded dry cleaners, geocoded gas stations, National Priority List sites, nuclear sites, solid waste facilities, Superfund hazardous waste sites, or Toxic Release Inventory sites are present within this buffer. Based on these findings and agency comments, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. U.S. Environmental Protection Agency

**Degree of Effect:** 2 Minimal

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### c. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.

- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.
- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C.
- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>
- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### iv. Farmlands

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

##### b. Natural Resources Conservation Service

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

No Prime or Unique Farmlands occur within any buffer width for Alternative 1.

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

#### v. Floodplains

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (18.5 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (1.2 acres) - an area inundated by 500-year flooding; and Zone X (28.4 acres) - an area determined to be outside the 100-year and 500-year floodplains. This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

A portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River.

**Comments on Effects to Resources:**

Bridging of the North Fork should be designed in such a way as to avoid filling of the floodplain. In addition, an upland corridor adjacent to the floodplain should be preserved.

Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

vi. Infrastructure

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary.

vii. Navigation

a. Coordinator Summary

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

**Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

b. U.S. Coast Guard

**Degree of Effect:** 3 Moderate

**Comments on Effects to Resources:**

A Coast Guard bridge permit will be required for this proposed bridge crossing. Please assure that we are designated as a Cooperating Agency for the NEPA documentation. The bridge clearances should be similar to the clearances on the St. Lucie Boulevard bridge crossing.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

c. U.S. Army Corps of Engineers

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Navigation in the North Fork of the St. Lucie River is a concern, as well as the connecting streams/waterways/finger canals that are accessible by canoe. Although extremely important, navigation is a moderate concern because I do not believe FDOT will have many objections to recommendations given that would minimize impacts or impede navigation.

**Comments on Effects to Resources:**

The Corps would need to determine if there is a negative impact on navigation. We would want to coordinate with the Coast Guard as well.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

viii. Special Designations

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Special Designations issue for Alternative 1 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Special Designations issue for this alternative.

**Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Comments on Effects to Resources:**

Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.

**Additional Comments (optional):**

The City will need to demonstrate that the project, whichever alternative is chosen, will not be inconsistent with the goals of the CERP project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality is addressed in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

c. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Type:**

Project has significant environmental cost

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Identified Resources and Level of Importance:**

Public Conservation Lands

**Comments on Effects to Resources:**

Corridor Alternative 1 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward along the existing West Virginia Drive, and crosses the north fork of the St. Lucie River (NFSLR) and connects to U.S. Highway 1 at Village Green Drive. A 2,860-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and urge that it be

eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 1 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); A tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**c. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Comments on Effects to Resources:**

- The proposed roadway improvements must meet the SFWMD's water quality and water quantity criteria as specified in the Basis of Review for Environmental Resource Permit Applications.
- If the proposed project is greater than 40% impervious, the surface water management system will need to provide at least 1/2-inch of dry detention or retention pre-treatment.
- Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.
- The proposed bridge should be designed to direct all storm water runoff through the surface water management system. Please be advised that the use of scuppers and water quality mitigation are not acceptable alternatives.
- Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Additional Comments (optional):**

Dewatering activities, if any, will require a water use permit.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**d. U.S. Environmental Protection Agency**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFS LAP).

**Comments on Effects to Resources:**

Alternative #1 is likely to introduce substantial impact on water quality due to contaminant loading as well as water flow caused by storm water management for the proposed alignment. The EIS should analyze and quantify this impact. From information available to date, it is likely that Alternative #1 would have more impact on water quality and quantity than Alternative #4.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**x. Wetlands**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wetlands issue for Alternative 1 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wetlands issue for this alternative.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

**b. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The wetlands within the potential alignment area are of high quality and are within and adjacent to the North Fork of the St. Lucie River Aquatic Preserve. The District and other agencies have committed resources to preserve and restore the North Fork and the associated flood plain as part of the Comprehensive Everglades Restoration Plan (CERP). Additionally, all of the alignments will cross state-owned sovereign submerged lands.

**Comments on Effects to Resources:**

Direct fill impacts as a result of bridge approaches, water management system infrastructure, pilings, etc., to wetlands are anticipated as a result of this alignment. The value of adjacent wetlands to wildlife may also be adversely affected. Adverse impacts to the functions of these high-quality wetlands should be reduced and eliminated through alignment alternatives and engineering design. The permit application should contain a thorough analysis of reduction and elimination of wetland impacts, including the rationale for selecting the preferred alignment and rejecting alternative options.

Once elimination and reduction of impacts has been achieved, mitigation should occur within the North Fork system. Staff recommends early coordination with staff of the Florida Department of Environmental Protection - Office of Coastal Aquatic Managed Areas, St. Lucie County, and the SFWMD to identify mitigation options, such as the purchase and restoration of oxbows within the North Fork system and/or mitigation options associated with Platts Creek or Ten-Mile Creek.

**Additional Comments (optional):**

Lands (wetland and upland) within the Preserve that will be utilized for this project will require a land swap with the Board of Trustees of the Internal Improvement Trust Fund and/or a public easement over the sovereign submerged lands. The schedule for completing this project should reflect the necessary time for consideration by the Board of Trustees (i.e., the Governor and Cabinet).

**Where Comment is Addressed in Document:** Wetlands (and CERP) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves).

**c. U.S. Army Corps of Engineers**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Wetlands and waters of the U.S. - this area has an extremely high level of importance to the Corps. The mangrove vegetation and tidal wetlands are almost pristine and serve an important role in aquatic function and value. This area of the North Fork of the St. Lucie River also has preserved vegetative buffers surrounding it, which would be impacted by the bridge. Any preserved lands that would be impacted would have negative impact in the public interest.

**Comments on Effects to Resources:**

To protect the function of the resources, the various off-site alternatives analysis would need to be considered, as well as the No-Action alternative by the Corps. Assuming that the No Action alternative is not practicable and an action alternative is needed to achieve the purpose, the Corps will need to closely evaluate each alternative and the feasibility of on-site avoidance and minimization for each location. On-site avoidance and minimization must be demonstrated by each alternative prior to the Corps entertaining the mitigation proposal. Possible options the Corps intends to evaluate for on-site avoidance include:

1. The Corps believes the best engineering technologies should be considered and implemented to avoid direct and indirect adverse affects to the proposed project's affected area that has regional influence and which has extremely high ecological functions and values, wildlife utilization, and public interest. The Corps would first support alternatives that demonstrate total avoidance and then would consider other alternatives that would demonstrate minimization efforts, once these efforts are exhausted, only then will alternatives that propose impacts to wetlands be considered. A tunnel alternative would provide a complete avoidance alternative that has no wetland impacts, but would still serve the project's stated purpose of providing a river crossing. Upland alternatives requiring rerouting traffic to the north and south are not reasonable due to the project's stated need. The tunnel alternative would also reduce the impacts to recreational and state park lands, and it would be expected to require less right of way acquisition for water quality treatment and attenuation ponds to compensate for additional impervious areas. This alternative could likely be built along any of the corridors.
2. Another reasonable construction alternative the Corps would support secondarily to an avoidance alternative would be a single span cable-stayed structure that would dramatically reduce temporary and permanent direct impacts, but would be expected to inflict secondary impacts through shading. The required abutments/piers for a cable stay bridge could be designed to be built in the abutting

uplands along any of the corridors. Or, if necessary, a middle pier could be considered within open water of the North Fork of the St Lucie River thereby avoiding direct impacts to forested wetlands.

3. If a standard elevated pile-supported structure is the preferred over a tunnel or suspension bridge, then aligning the transportation corridor along the straight runs or reaches of the NFSLR would constitute minimization efforts to avoid and reduce direct and secondary impacts that would be expected by pier placement within forested wetlands and permanent secondary impacts from shading. A shading analysis should be done for any elevated structure.
4. The Corps would support construction that can be done with materials such as High Performance Steel (HPS) for the super structure as a viable minimization effort to offset direct and indirect adverse affects to endangered species and wetlands and natural habitats. Implementing the use of HPS could provide a way to maximize the span length and reduce the number of piers, and avoid future maintenance events that may increase adverse effects to the natural environment. The following are additional benefits to using HPS: HPS does not require painting; therefore additional benefits include the absence of periodical and disruptive painting and maintenance activities, the absence for the need to apply solvents or paints with toxic metal components, and reduction in the need for future maintenance including surface preparation activities such as sand blasting or temporary work platforms. Additional benefits may also include avoiding the potential for entanglement of manatees from temporary work platform rigging, or suspension ropes. HPS materials would reasonably be expected to avoid and minimize adverse affects associated with frequent maintenance events: temporary lighting, temporary noise, and dust irritants on fish and wildlife.
5. Top down construction associated with a segmental bridge could also provide increased span length, and a reduction in the overall need for piers, and would be considered a minimization effort for the project.
6. Some alternatives show an alignment bisecting/crossing over an island. Shifting the alignment to cross over open water or at one end may be beneficial by avoiding fragmentation of the natural resources on the island.

Minimization:

With the high quality resources, construction methodologies for any in-water work (including surveying, soil samples, platforms, barges, etc) are a concern. Any additional wetland/mangrove impacts must be minimized to the maximum extent practicable. The location of the staging area is needed to be shown, and limited to uplands, preferably disturbed areas. An environmental survey of the surrounding areas will be needed to determine the habitat type, quality of habitat, and possible resources for site selection.

Mitigation:

The FDOT would need to UMAM the site to determine the function and value of the wetlands and waters of the U.S.. A comparison of UMAM scores from each river crossing may help determine (at least in one aspect) the least environmentally damaging alternative. Any impacts to public lands would need to be replaces, as well as mitigation for the direct and indirect wetland impacts.

Additional Comments (optional):

The Corps will also take into consideration public interest factors. This includes the effects the work might have on conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, land use, navigation, shore erosion and accretion, recreation, water quality, safety, and consideration of property ownership. We will need to evaluate each criterion separately with each alternative. I believe that several factors would be negatively affected by this project. We need to make sure that the negative effects would not be unacceptable.

A detailed direct and indirect construction impact analysis including noise affects, lighting affects, anticipated benthic sediment mobilization affects, and barge staging areas will be required to estimate the impacts associated with temporary access roads, temporary drainage ponds or conveyance, temporary heavy crane locations, reasonably anticipated staging and stockpiling activities and locations. Please provide a detailed discussion on how the construction of any pier or other structure in a forested wetland can reasonably be done without causing considerable long term impacts. An in-depth and clear discussion is needed to understand how the remote locations along the project will be accessed with heavy equipment, and the duration required.

Additional information needed is a discussion on the design requirements, if any, such as the horizontal alignment and the need to elevate a structure for clearance over land or water that would require extending bridge abutments into the wetlands. Direct impacts as well as shading impacts will need to be quantified and assessed.

Where Comment is Addressed in Document: Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*).

d. U.S. Environmental Protection Agency

Degree of Effect: 4 Substantial

Comments on Effects to Resources:

Impact on wetlands is significant. An EIS must thoroughly consider a no-build option and an option to increase the capacity of existing facilities. Should these options be proven ineffective, avoidance and minimization of impact must be optimized.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

e. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Coordination Document:**

Permit Required

**Identified Resources and Level of Importance:**

The proposed project area encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP) and Savannas Preserve State Park (SPSP), both designated Outstanding Florida Waters.

The EST indicates that there are 56.71 acres of estuarine and 8.83 acres of palustrine wetlands within the 500-foot buffer zone of the project. The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification for each alternative is: 32.65, 228.69, 220.86, 5.47, 43.20, 3.48 and 1.07 acres of freshwater marsh, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands, wet prairies and mixed wetland forest, respectively.

Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP and SPSP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

**Comments on Effects to Resources:**

An analysis of existing river crossings should be conducted to determine whether the widening of existing bridges would achieve the objectives sought by the City. FDOT studies have not previously supported the need for a third river crossing. The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands and uplands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve and state park must be presented to the Trustees for a determination of the parkway's compatibility with the conservation and preservation purposes for which the lands were acquired. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSLAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve and state park have been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection

40E-4.302(1) (a), F.A.C. Reasonable assurance has not been provided that the proposed activity will be "clearly in the public interest" upon weighing and balancing the factors stated in subsection 40E-4.302(1) (a), F.A.C.

The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under. As proposed, the activity does not appear to meet the Conditions for Issuance or Additional Conditions for Issuance for an ERP under Part IV of Chapter 373, F.S., and Sections 40E-4.301 and 40E-4.302, F.A.C., because the applicant has not provided reasonable assurances that:

- (a) The proposed activity will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- (b) The proposed activity will not adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- (c) The proposed activity will not adversely affect the relative value of functions being performed by areas affected by the proposed regulated activity;

- (d) The proposed activity will not adversely affect the quality of receiving waters so that the special water quality standards for Outstanding Florida Waters will be met; and
- (e) The proposed activity located in, on, or over wetlands or other surface waters, will be clearly in the public interest.

**Additional Comments (optional):**

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. Until the Department has an opportunity to evaluate more detailed information on the proposed project and related projects in the I-95-to-Hutchinson Island corridor and their effects on aquatic preserves, state parks, wetlands, and surface water quality, the Department cannot support the project or evaluate its consistency with the Florida Coastal Management Program. The scope and magnitude of the proposed roadway improvements dictates that the applicant comply with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements by evaluating the anticipated environmental impacts at logical termini. It is therefore recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

To avoid crossing the NFSLRAP and SPSP, the City needs to identify alternatives to the proposed bridge construction, including land use changes and modification of existing transportation system components. The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. If another east-west corridor to Hutchinson Island is justified, the team should also determine the location that minimizes impacts to environmental resources. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources because of their recreational (and other) values; Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

**f. U.S. Fish and Wildlife Service**

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

#### Comments on Effects to Resources:

Corridor Alternative 1 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward along the existing West Virginia Drive, and crosses the north fork of the St. Lucie River (NFSLR) and connects to Village Green Drive. A 2,860-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and strongly urge that it be eliminated from further consideration.

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

#### **g. National Marine Fisheries Service**

**Degree of Effect:** 4 Substantial

#### **Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977).

Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss

exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

**Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

**Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

**Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

**Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

**Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template. NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15

(Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

xi. Wildlife and Habitat

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wildlife and Habitat issue for Alternative 1 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wildlife and Habitat issue for this alternative.

**Commitments and Responses:**

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

**Service Comments, Federally Listed Species:**

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

**Wood Stork**

All the proposed project corridor alternatives are located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

### West Indian Manatee

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic-Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800-DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330. The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, bald eagle (*Haliaeetus leucocephalus*), West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/Species\\_lists/PDF-lists/St.LucieCounty.pdf](http://www.fws.gov/verobeach/Species_lists/PDF-lists/St.LucieCounty.pdf)). Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

### Service Comments, Fish and Wildlife Resources, Wetlands, and Special Designations:

#### Corridor Alternative 1

Corridor Alternative 1 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward along the existing West Virginia Drive, and crosses the north fork of the St. Lucie River (NFSLR) and connects to Village Green Drive. A 2,860-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 1 for the project and strongly urge that it be eliminated from further consideration. We note that Corridor

Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

#### Additional Comments (optional):

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 5 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

Where Comment is Addressed in Document: Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

#### c. FL Fish and Wildlife Conservation Commission

Degree of Effect: 4 Substantial

#### Identified Resources and Level of Importance:

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

#### Fish and Wildlife and Habitat Resources:

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannas Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map. Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and cumulative effects: Atlantic hawkbill (E), loggerhead turtle (T), green sea turtle (E), Kemp's ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Sherman's fox squirrel (SSC), Florida mouse (SSC), Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

#### Comments on Effects to Resources:

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Public conservation lands of the Savannas Preserve

State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

**Additional Comments (optional):**

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3). In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives.

While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.
2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals, amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.
4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.
5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.

6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

**Where Comment is Addressed in Document:** Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including, but not limited to, the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands Impacts) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation). The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

## B. Cultural

### i. Historical and Archaeological Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

**Commitments and Responses:**

Preparation of a Cultural Resource Assessment Survey will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

b. FL Department of State

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building

500 South Bronough Street

Tallahassee, FL 32399-0250

(850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

c. Miccosukee Tribe

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

These comments are for all alternatives. There is one archaeological site located near or within the project boundaries for all alternatives. A Cultural Resources Survey needs to be done to determine if there are any other sites and the impacts, if any, to the one site. Once this is done, then effects can be determined.

**Comments on Effects to Resources:**

Once a Cultural Resources Survey has been done, then effects, if any, to archaeological sites can be ascertained.

**Additional Comments (optional):**

If the Cultural Resources Survey shows there are no archaeological sites that will be impacted by this project, then no further consultation is necessary. However, if the Cultural Resources Survey does show that archaeological sites will be impacted by this project, then further consultation with the Miccosukee Tribe should be done.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSLAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the recommendations section of the 9/23/03 DEP Memorandum (see pages 9-10). Additionally, FDOT should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across both the NFSLAP and SPSP.

**Additional Comments (optional):**

Under Article X, Section 18 of the Florida Constitution (as amended in 1998), dispositions of state-owned conservation lands are restricted to those lands "no longer needed for conservation purposes." If the proposed parkway/bridge construction activities necessitate right-of-way expansion, the FDOT will need to request that the Board of Trustees of the Internal Improvement Trust Fund determine whether the subject properties are no longer needed for conservation purposes. This requirement must be met before the conveyance of these lands can proceed.

In addition, please be advised that proposals to utilize state conservation lands may be required to meet the guidelines of the state's linear facility policy, POLICY Use of Natural Resource Lands by Linear Facilities as Approved by Board of Trustees of the Internal Improvement Trust Fund on January 23, 1996.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

c. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

iii. Section 4(f) Potential

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

The EST GIS analysis results indicate that this alignment is located near conservation land. For these reasons, and based on agency comments, a Summary DOE of Moderate has been assigned to the Section 4(f) Potential issue for this alternative. Due to the significance of the noted recreational feature, a Section 4(f) Determination of Applicability will be required. The final design for this alignment will avoid or minimize impacts to this area to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

**C. Community**

**i. Aesthetics**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 2 Minimal

**Comments:**

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; however, extensive public involvement will need to be conducted in order to determine the desired aesthetic enhancements. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Aesthetics issue for this alternative.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

**b. St. Lucie TPO**

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

In observation of the neighboring communities, an extensive public involvement plan is needed during the project development phase.

**Comments on Effects to Resources:**

Coordination and input from the public, the City of Port St. Lucie and St. Lucie County is important to determine the desired aesthetic enhancements.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

**ii. Economic**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 2 Minimal

**Comments:**

According to agency comments, this project is anticipated to have minimal impacts on economic resources within the area. As such, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative.

**Where Comment is Addressed in Document:** Sociocultural Effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

**b. St. Lucie TPO**

**Degree of Effect:** 2 Minimal

**Comments on Effects to Resources:**

No significant economic resources are located in proximity to this project.

**Where Comment is Addressed in Document:** No response required.

**iii. Land Use**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 3 Moderate

**Comments:**

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

b. FL Department of Community Affairs

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

This project is compatible with local growth management policies and adopted land use plans.

**Comments on Effects to Resources:**

This project is included in the MPO's five-year Transportation Improvement Program (TIP).

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

iv. Mobility

a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

Based on agency comments, this alignment will serve as a critical transportation route during emergency evacuation periods. The project is also anticipated to enhance public safety, as well as improve accessibility and connectivity between communities located at the project termini. For these reasons, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Comments on Effects to Resources:**

The Third East/West River Crossing (Crosstown Parkway Extension) is a transportation route critical to coastal evacuation. The project will help to enhance public safety, mobility, and accessibility, over the long term, for the residents of the communities at each end of the project.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

v. Relocation

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, the project will likely relocate 46 residences and 2 community facilities as it will require additional right-of-way. This alternative, however, is expected to have the lowest impacts to community cohesion compared to the other alternatives. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Relocation issue for this alternative.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

b. St. Lucie TPO

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

- Right of Way acquisition is anticipated due to Alternative 1 (1C).
- The project will require 46 residential relocations and 2 community facility relocations along West Virginia Drive between Floresta Drive and Coral Reef Street.
- All 4 alternative alignments will require 6 lanes. At the present time this is a 2 lane road through low and medium density residential areas.
- The project cuts through these residential communities and displacement of residences is expected.

**Comments on Effects to Resources:**

- This alternative is the one with the lowest Community Cohesion impacts.
- This alternative is the most direct extension of the Crosstown Parkway to U.S. 1 and the one with the least residential relocations.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, this alternative has the highest support from residents. However, due to the fact that this project will introduce a 6-lane facility to an area that currently consists of low and medium residential uses and 2-lane streets, the social characteristics of these neighborhoods will likely be adversely affected. In addition, there is potential for surrounding communities to express strong opposition to this project. For these reasons, a Summary DOE of Substantial has been assigned to the Social issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

c. U.S. Environmental Protection Agency

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Characteristics of residential areas west of the river.

**Comments on Effects to Resources:**

All 4 alternative alignments will introduce a 6 lane alignment to what currently is an area of 2 lane streets of low and medium density residential area. The proposed alignment will substantially impact the social characteristics of these neighborhoods.

**Additional Comments (optional):**

Thorough public input is crucial. Residents in the area west of the river must understand this significant change, and must provide their input after being provided the opportunity to fully invasion the impact on the characteristics of the area.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

d. St. Lucie TPO

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

- The proposed Crosstown Parkway project will require a bridge crossing over the North Fork of the St. Lucie River. The east end of the project at U.S 1 and Village Green Drive consists mainly of commercial areas and some residential. West of the North Fork of the St. Lucie River along West Virginia Dr. the area consist of mainly single family homes. This community will be affected with this alternative because of the residential relocations.
- The proposed alignment will impact the social characteristics of the surrounding neighborhoods.
- There is displacement of population due to this project. The project anticipates right of way acquisitions.

**Comments on Effects to Resources:**

Although this alternative has the highest support from the residents, other communities surrounding the project may have diverse and strong opinions in regard to this project. A major public outreach effort is necessary.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

D. Secondary and Cumulative

i. Secondary and Cumulative Effects

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

**b. FL Department of Environmental Protection**

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. The project's potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor between West Virginia Drive and I-95 and the Florida Turnpike, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10).

The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor between I-95 and Hutchinson Island. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP, SPSP, Indian River Lagoon Aquatic Preserve, and surrounding communities is necessary. The EIS should consider secondary and cumulative impacts that may result from additional development on Hutchinson Island if the proposed bridge is built. Items that should be evaluated include: stormwater runoff from increased impervious surfaces, impacts to listed species resulting from increased development and human activity on the island, and conflicts with the Coastal Barrier Resource Act. The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the proposed re-routing of I-95 and Turnpike traffic through the City.

The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other projects in the I-95-to-Hutchinson Island corridor comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency).

**c. FL Department of State**

**Degree of Effect:** 2 Minimal

**Comments on Effects:**

No secondary or cumulative effects can be foreseen at this time.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

**d. FL Fish and Wildlife Conservation Commission**

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts would be substantial for all four alignments, and may include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access. Water quality could be reduced, and increased siltation may occur due to runoff from the proposed road. Increased roadkills for many species could also occur, including bird, mammal, amphibian, and reptile species listed by FWC.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

We recommend that the Class of Action on this project be an Environmental Impact Statement (EIS) due to the potential adverse direct and secondary impacts that would result in substantial and irreversible impacts to natural resources.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

e. FL Department of State

**Degree of Effect:** 3 Moderate

**Coordination Document:**

**Comments on Effects:**

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); sociocultural effects (including cultural resources) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

f. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts would be substantial for all four alignments, and may include secondary impacts due construction methods, reduced value of adjacent land to wildlife due to traffic and human use, and the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Secondary and cumulative impacts to wetlands and wildlife must be addressed during the permitting process through reduction and elimination and mitigation for unavoidable impacts. Project modifications may be required to reduce or eliminate species impacts in accordance with the wildlife agencies. Mitigation plans may require special consideration of the needs of wildlife species impacted by the project.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

## 2. Alternative 2/2A

### A. Natural

#### i. Air Quality

##### a. Coordinator – District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

##### b. U.S. Environmental Protection Agency

**Degree of Effect:** 0 None

**Comments on Effects to Resources:**

Based on data available, no significant impact on air quality has been identified.

**Where Comment is Addressed in Document:** Air quality is address in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality)

#### ii. Coastal and Marine

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 1.2 acres of coastal wetlands, 2.9 acres of natural river, and 609.8 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. For these reasons and based on agency comments, a Summary DOE of Substantial has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

##### b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane

(*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with

the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gillmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project

description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template. NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, the 500-foot project buffer contains one Super Act Risk Source; two FDEP regulated and unregulated storage tanks, and one RCRA-regulated facility. No geocoded dry cleaners, geocoded gas stations, National Priority List sites, nuclear sites, solid waste facilities, Superfund hazardous waste sites, or Toxic Release Inventory sites are present within this buffer. Based on these findings and agency comments, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.
- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.
- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C.

- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>
- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

c. U.S. Environmental Protection Agency

**Degree of Effect:** 2 Minimal

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

iv. Farmlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

b. Natural Resources Conservation Service

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

No Prime or Unique Farmlands occur within any buffer width for Alternative 2.

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

v. Floodplains

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (19.8 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (3.4 acres) - an area inundated by 500-year flooding; and Zone X (30.4 acres) - an area determined to be outside the 100-year and 500-year floodplains.

This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

A portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River.

**Comments on Effects to Resources:**

Bridging of the North Fork should be designed in such a way as to avoid filling of the floodplain. In addition, an upland corridor adjacent to the floodplain should be preserved.

Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

vi. Infrastructure

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary

vii. Navigation

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

**Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

viii. Special Designations

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Special Designations issue for Alternative 2 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Special Designations issue for this alternative.

**Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is a designated Aquatic Preserve, an Outstanding Florida Water, and much of the undeveloped uplands adjacent to the River are a state park. Additionally this area is within a Comprehensive Everglades Restoration Plan (CERP) project.

**Comments on Effects to Resources:**

Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.

**Additional Comments (optional):**

The City will need to demonstrate that the project, whichever alternative is chosen, will not be inconsistent with the goals of the CERP project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality is addressed in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**c. U.S. Fish and Wildlife Service**

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 2 begins at the intersection of the Crosstown Parkway and Manth Lane, curves to the southeast to Walters Terrace, extends eastward along the existing Walters Terrace, crosses the north fork of the St. Lucie River (NFSLR), and connects to Midport Road and ultimately U.S. Highway 1. A 2,230-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 2 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is

addressed in DEIS Section 1.5 (Areas of Controversy); A tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is an Aquatic Preserve and an Outstanding Florida Water.

**Comments on Effects to Resources:**

- The proposed roadway improvements must meet the SFWMD's water quality and water quantity criteria as specified in the Basis of Review for Environmental Resource Permit Applications.
- If the proposed project is greater than 40% impervious, the surface water management system will need to provide at least 1/2-inch of dry detention or retention pre-treatment.
- Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.
- The proposed bridge should be designed to direct all storm water runoff through the surface water management system. Please be advised that the use of scuppers and water quality mitigation are not acceptable alternatives.
- Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Additional Comments (optional):**

Dewatering activities, if any, will require a water use permit.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. U.S. Environmental Protection Agency

**Degree of Effect:** 4 Substantial

**Comments on Effects to Resources:**

Alternative #2 is likely to introduce substantial impact on water quality due to contaminant loading as well as water flow caused by storm water management for the proposed alignment. The EIS should analyze and quantify this impact. From information available to date, it is likely that Alternative #2 would have more impact on water quality and quantity than Alternative #4.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

d. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

x. Wetlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wetlands issue for Alternative 2 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wetlands issue for this project.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannas Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 2 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward along the existing Walters Terrace, crosses the north fork of the St. Lucie River (NFSLR), and connects to Village Green Drive. A 2,230-foot bridge would be required

to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and strongly urge that it be eliminated from further consideration.

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

**c. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The wetlands within the potential alignment area are of high quality and are within and adjacent to the North Fork of the St. Lucie River Aquatic Preserve. The District and other agencies have committed resources to preserve and restore the North Fork and the associated flood plain as part of the Comprehensive Everglades Restoration Plan (CERP). Additionally, all of the alignments will cross state-owned sovereign submerged lands.

**Comments on Effects to Resources:**

Direct fill impacts as a result of bridge approaches, water management system infrastructure, pilings, etc, to wetlands are anticipated as a result of this alignment. The value of adjacent wetlands to wildlife may also be adversely affected. Adverse impacts to the functions of these high-quality wetlands should be reduced and eliminated through alignment alternatives and engineering design. The permit application should contain a thorough analysis of reduction and elimination of wetland impacts, including the rationale for selecting the preferred alignment and rejecting alternative options.

Once elimination and reduction of impacts has been achieved, mitigation should occur within the North Fork system. Staff recommends early coordination with staff of the Florida Department of Environmental Protection - Office of Coastal Aquatic Managed Areas, St. Lucie County, and the SFWMD to identify mitigation options, such as the purchase and restoration of oxbows within the North Fork system and/or mitigation options associated with Platts Creek or Ten-Mile Creek.

**Additional Comments (optional):**

Lands (wetland and upland) within the Preserve that will be utilized for this project will require a land swap with the Board of Trustees of the Internal Improvement Trust Fund and/or a public easement over the sovereign submerged lands. The schedule for completing this project should reflect the necessary time for consideration by the Board of Trustees (i.e., the Governor and Cabinet).

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**d. FL Department of Environmental Protection**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The proposed project area encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP) and Savannahs Preserve State Park (SPSP), both designated Outstanding Florida Waters.

The EST indicates that there are 9.05 acres of estuarine and 0.16 acres of palustrine wetlands within the 500-foot buffer zone of the project. The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification for each alternative is: 3.14, 0.07,

38.15, 16.14, 241.22, 236.36, 3.55, 20.02, 3.48 and 26.17 acres of cypress, mixed cypress, freshwater marsh, mangrove swamp, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands, wet prairies and mixed wetland forest, respectively.

Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP and SPSP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

#### **Comments on Effects to Resources:**

An analysis of existing river crossings should be conducted to determine whether the widening of existing bridges would achieve the objectives sought by the City. FDOT studies have not previously supported the need for a third river crossing. The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands and uplands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve and state park must be presented to the Trustees for a determination of the parkway's compatibility with the conservation and preservation purposes for which the lands were acquired. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSLAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve and state park have been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection 40E-4.302(1) (a), F.A.C. Reasonable assurance has not been provided that the proposed activity will be "clearly in the public interest" upon weighing and balancing the factors stated in subsection 40E-4.302(1) (a), F.A.C. The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under. As proposed, the activity does not appear to meet the Conditions for Issuance or Additional Conditions for Issuance for an ERP under Part IV of Chapter 373, F.S., and Sections 40E-4.301 and 40E-4.302, F.A.C., because the applicant has not provided reasonable assurances that:

- (a) The proposed activity will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- (b) The proposed activity will not adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- (c) The proposed activity will not adversely affect the relative value of functions being performed by areas affected by the proposed regulated activity;
- (d) The proposed activity will not adversely affect the quality of receiving waters so that the special water quality standards for Outstanding Florida Waters will be met; and
- (e) The proposed activity located in, on, or over wetlands or other surface waters, will be clearly in the public interest.

#### **Additional Comments (optional):**

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. Until the Department has an opportunity to evaluate more detailed information on the proposed project and related projects in the I-95-to-Hutchinson Island corridor and their effects on aquatic preserves, state parks, wetlands, and surface water quality, the Department cannot support the project or evaluate its consistency with the Florida Coastal Management Program. The scope and magnitude of the proposed roadway improvements dictates that the applicant comply with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements by evaluating the anticipated environmental impacts at logical termini. It is therefore recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

To avoid crossing the NFSLRAP and SPSP, the City needs to identify alternatives to the proposed bridge construction, including land use changes and modification of existing transportation system components. The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. If another east-west corridor to Hutchinson Island is justified, the team should also determine the location that minimizes impacts to environmental resources. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources because of their recreational (and other) values; Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

e. U.S. Army Corps of Engineers

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Wetlands and waters of the U.S. - this area has an extremely high level of importance to the Corps. This area of the North Fork of the St. Lucie River has preserved vegetative buffers surrounding it, which would be impacted by the bridge.

**Comments on Effects to Resources:**

Direct impacts as well as shading impacts will need to be quantified and assessed. Avoidance and minimization must be demonstrated. The FDOT may want to UMAM the site to determine the function and value of the wetlands and waters of the U.S.. A comparison of UMAM scores from each river crossing may help determine (at least in one aspect) the least environmentally damaging alternative. Other factors will be considered as discussed below.

**Additional Comments (optional):**

The Corps will also take into consideration public interest factors. This includes the effects the work might have on conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, land use, navigation, shore erosion and accretion, recreation, water quality, safety, and consideration of property ownership. We will need to evaluate each criterion separately with each alternative. I believe that several factors would be negatively affected by this project. We need to make sure that the negative effects would not be unacceptable.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

f. U.S. Environmental Protection Agency

**Degree of Effect:** 4 Substantial

**Comments on Effects to Resources:**

Impact on wetlands is significant. An EIS must thoroughly consider a no-build option and an option to increase the capacity of existing facilities. Should these options be proven ineffective, avoidance and minimization of impact must be optimized.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in Section 3.0 (Alternatives Including Proposed Action.)

g. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane

(*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

**Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

**Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

**Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.

- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

**Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

**Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.).

In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect).

To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template. NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

**xi. Wildlife and Habitat**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wildlife and Habitat issue for Alternative 2 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wildlife and Habitat issue for this project.

**Commitments and Responses:**

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

Where Comment is Addressed in Document: The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. FL Fish and Wildlife Conservation Commission

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

Fish and Wildlife and Habitat Resources

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannas Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map. Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and cumulative effects: Atlantic hawksbill (E), loggerhead turtle (T), green sea turtle (E), Kemps ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Shermans fox squirrel (SSC), Florida mouse (SSC), Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

Comments on Effects to Resources:

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Public conservation lands of the Savannas Preserve State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

Additional Comments (optional):

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor

of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3). In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives.

While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.
2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals, amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.
4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.
5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.
6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

Where Comment is Addressed in Document: Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands Impacts) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation). The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

c. U.S. Fish and Wildlife Service

Degree of Effect: 5 Dispute Resolution

Dispute Justification:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannas Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and urge that it be eliminated from further consideration.

Recommended Actions for Dispute:

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

Identified Resources and Level of Importance:

Federally listed species and fish and wildlife resources

Comments on Effects to Resources:

Service Comments, Federally Listed Species:

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

Wood Stork

All the proposed project corridor alternatives are located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

West Indian Manatee

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic- Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800- DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, bald eagle (*Haliaeetus leucocephalus*), West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/Species\\_lists/PDF-lists/St. Lucie County.pdf](http://www.fws.gov/verobeach/Species_lists/PDF-lists/St.LucieCounty.pdf)). Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Service Comments, Fish and Wildlife Resources, Wetlands, and Special Designations:

Corridor Alternative 2 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward along the existing Walters Terrace, crosses the north fork of the St. Lucie River (NFSLR), and connects to Village Green Drive. A 2,230-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 2 for the project and strongly urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

Additional Comments (optional):

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 2 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

**B. Cultural**

**i. Historic and Archaeological**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

**Commitments and Responses:**

Preparation of a Cultural Resource Assessment Survey will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

**b. Miccosukee Tribe**

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

I found that one prehistoric site from SHPO survey is here (SL01145) but could not obtain enough information on it to determine what it is. Also, due to the location at the NFSLR, a Cultural Resources Survey needs to be done. One was not included in the uploaded documents. Once this is done and a copy sent to me, then this issue can be resolved.

**Comments on Effects to Resources:**

Not known at this time until sufficient information is provided.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

**c. FL Department of State**

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building

500 South Bronough Street

Tallahassee, FL 32399-0250 (850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Coordination Document:**

Permit Required

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSLAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). Additionally, FDOT should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across both the NFSLAP and SPSP.

**Additional Comments (optional):**

Under Article X, Section 18 of the Florida Constitution (as amended in 1998), dispositions of state-owned conservation lands are restricted to those lands "no longer needed for conservation purposes." If the proposed parkway/bridge construction activities necessitate right-of-way expansion, the FDOT will need to request that the Board of Trustees of the Internal Improvement Trust Fund determine whether the subject properties are no longer needed for conservation purposes. This requirement must be met before the conveyance of these lands can proceed.

In addition, please be advised that proposals to utilize state conservation lands may be required to meet the guidelines of the state's linear facility policy, POLICY Use of Natural Resource Lands by Linear Facilities as Approved by Board of Trustees of the Internal Improvement Trust Fund on January 23, 1996.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual

Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

c. Federal Highway Administration

Degree of Effect: 3 Moderate

Identified Resources and Level of Importance:

Savannas Preserve State Park

Comments on Effects to Resources:

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

Where Comment is Addressed in Document: Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

iii. Section 4(f)

a. Coordinator – FDOT District 4

Degree of Effect: 3 Moderate

Comments:

The EST GIS analysis results indicate that this alignment is located near conservation land. For these reasons, and based on agency comments, a Summary DOE of Moderate has been assigned to the Section 4(f) Potential issue for this alternative. Due to the significance of the noted recreational feature, a Section 4(f) Determination of Applicability will be required. The final design for this alignment will avoid or minimize impacts to this area to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

Commitments and Responses:

A Section 4(f) Determination of Applicability will be required for this project.

Where Comment is Addressed in Document: The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

Degree of Effect: 3 Moderate

Identified Resources and Level of Importance:

Savannas Preserve State Park

Comments on Effects to Resources:

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

Where Comment is Addressed in Document: The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

C. Community

i. Aesthetics

a. Coordinator – FDOT District 4

Degree of Effect: 2 Minimal

Reviewed By:

FDOT District 4 (9/22/2008)

Comments:

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; however, extensive public involvement will need to be conducted in order to determine the desired aesthetic enhancements. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Aesthetics issue for this alternative.

Where Comment is Addressed in Document: Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Identified Resources and Level of Importance:

In observation of the neighboring communities, an extensive public involvement plan is needed during the project development phase.

Comments on Effects to Resources:

Coordination and input from the public, the City of Port St. Lucie and St. Lucie County is important to determine the desired aesthetic enhancements.

Where Comment is Addressed in Document: Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

ii. Economic

a. Coordinator – FDOT District 4

Degree of Effect: 2 Minimal

Comments:

According to agency comments, this project is anticipated to have minimal impacts on economic resources within the area. As such, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative.

Where Comment is Addressed in Document: Sociocultural Effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Comments on Effects to Resources:

No significant economic resources are located in proximity to this project.

Where Comment is Addressed in Document: No response required.

iii. Land Use

a. Coordinator – FDOT District 4

Degree of Effect: 3 Moderate

Comments:

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

Where Comment is Addressed in Document: Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Identified Resources and Level of Importance:

This project is compatible with local growth management policies and adopted land use plans.

Comments on Effects to Resources:

This project is included in the MPO's five-year Transportation Improvement Program (TIP).

Where Comment is Addressed in Document: Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. FL Department of Community Affairs

Degree of Effect: 3 Moderate

Identified Resources and Level of Importance:

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The

majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

#### iv. Mobility

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

Based on agency comments, this alignment will serve as a critical transportation route during emergency evacuation periods. The project is also anticipated to enhance public safety, as well as improve accessibility and connectivity between communities located at the project termini. For these reasons, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

##### b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Comments on Effects to Resources:**

The Third East-West River Crossing (Crosstown Parkway Extension) is a transportation route critical to coastal evacuation. The project will help to enhance public safety, mobility, and accessibility, over the long term, for the residents of the communities at each end of the project.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

#### v. Relocation

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely relocate 131 residences and 1 community facility as it will require additional right-of-way. Due to the fact that this alternative is the longest proposed alignment, impacts to community cohesion (as a result of residential relocations) are anticipated to be the most significant compared to the other alternatives. Based on the foregoing, a Summary DOE of Substantial has been assigned to the relocation issue for this alternative.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

##### b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- Alternative 2(2A) anticipates Right of Way acquisition.
- The project will require 131 residential relocations and 1 community facility relocation along Walters Terrace from west of the river to West Virginia Drive.
- All four alternative alignments will require 6 lanes. At the present time this is a 2 lane road through low and medium density residential areas. This corridor will go through these residential communities and a significant displacement of residences is expected.

**Comments on Effects to Resources:**

- This alternative has the highest Community Cohesion impacts and is the one with the most residential relocations.

- Alternative 2(2A) is the longest corridor to U.S. 1.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, impacts to residential areas in the project vicinity are expected to be substantial due to the fact that this alternative is the longest proposed alignment and is anticipated to require a significant amount of right-of-way. In addition, there is potential for surrounding communities to express strong opposition to this project. For these reasons, a Summary DOE of Substantial has been assigned to the Social issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

c. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- The proposed Crosstown Parkway project will require a bridge crossing over the North Fork of the St. Lucie River. The east end of the project at U.S 1 consists of residential neighborhoods on both sides just west of US 1 and commercial areas at Walton Rd. and U.S. 1.
- The proposed alignment will significantly impact the social characteristics of the surrounding neighborhoods.
- There will be displacement of population due to this project.
- The project anticipates a large number of right of way acquisitions.

**Comments on Effects to Resources:**

- To the west of the North Fork of the St. Lucie River the community will be significantly affected with this alternative because of the residential relocations.
- Communities surrounding the project may have diverse and strong opinions in regard to this project.
- This alternative will substantially impact residential areas and is the longest corridor to U.S. 1.

Where Comment is Addressed in Document: Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); relocations are addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

D. Secondary and Cumulative

i. Secondary and Cumulative Effects

a. Coordinator – FDOT District 4

Degree of Effect: 4 Substantial

Comments:

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

Where Comment is Addressed in Document: Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

b. FL Department of State

Degree of Effect: 3 Moderate

Comments on Effects:

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

Where Comment is Addressed in Document: Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

c. FL Fish and Wildlife Conservation Commission

Degree of Effect: 4 Substantial

Comments on Effects:

Secondary and cumulative impacts could be substantial for all four alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access. Water quality could be reduced, and increased siltation may occur due to runoff from the proposed road. Increased roadkills for many species may also occur, including bird, mammal, amphibian, and reptile species listed by FWC.

Recommended Avoidance, Minimization, and Mitigation Measures:

We recommend that the Class of Action on this project be an Environmental Impact Statement (EIS) due to the potential adverse direct and secondary impacts that would result in substantial and irreversible impacts to natural resources.

Recommended Actions to Improve At-Risk Resources:

We request that FDOT fully and adequately address the No Build Alternative during the upcoming Project Development and Environmental Study (PD&E), and search for ways to resolve this issue with reduced impacts to important and irreplaceable natural systems.

Where Comment is Addressed in Document: Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

d. FL Department of Environmental Protection

Degree of Effect: 4 Substantial

Comments on Effects:

The North Fork St. Lucie Aquatic Preserve (NFSAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. The project's potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor between West Virginia Drive and I-95 and the Florida Turnpike, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor between I-95 and Hutchinson Island. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP, SPSP, Indian River Lagoon Aquatic Preserve, and surrounding communities is necessary.

The EIS should consider secondary and cumulative impacts that may result from additional development on Hutchinson Island if the proposed bridge is built. Items that should be evaluated include: stormwater runoff from increased impervious surfaces, impacts to listed species resulting from increased development and human activity on the island, and conflicts with the Coastal Barrier Resource Act. The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the proposed re-routing of I-95 and Turnpike traffic through the City.

The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other projects in the I-95-to-Hutchinson Island corridor comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Recommended Actions to Improve At-Risk Resources:**

None found.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation)

e. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts would be substantial for all four alignments, and may include secondary impacts due construction methods, reduced value of adjacent land to wildlife due to traffic and human use, and the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Secondary and cumulative impacts to wetlands and wildlife must be addressed during the permitting process through reduction and elimination and mitigation for unavoidable impacts. Project modifications may be required to reduce or eliminate species impacts in accordance with the wildlife agencies. Mitigation plans may require special consideration of the needs of wildlife species impacted by the project.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

### 3. Alternative 3/2D

#### A. Natural

##### i. Air Quality

###### a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

###### b. U.S. Environmental Protection Agency

**Degree of Effect:** 0 None

**Comments on Effects to Resources:**

Based on data available, no significant impact on air quality has been identified.

**Where Comment is Addressed in Document:** Air quality is address in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

##### ii. Coastal and Marine

###### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 1.2 acres of coastal wetlands, 2.9 acres of natural river, and 606.5 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. For these reasons and based on agency comments, a Summary DOE of Substantial has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

###### b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife

Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gillmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon.

Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on

listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, the 500-foot project buffer contains one Super Act Risk Source; two FDEP regulated and unregulated storage tanks, and one RCRA-regulated facility. No geocoded dry cleaners, geocoded gas stations, National Priority List sites, nuclear sites, solid waste facilities, Superfund hazardous waste sites, or Toxic Release Inventory sites are present within this buffer. Based on these findings and agency comments, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.
- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.
- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C.
- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the

environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>

- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

c. U.S. Environmental Protection Agency

**Degree of Effect:** 2 Minimal

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

iv. Farmlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

b. Natural Resources Conservation Services

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

No Prime or Unique Farmlands occur within any buffer width for Alternative 3.

**Comments on Effects to Resources:**

None found.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

v. Floodplains

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (19.9 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (3.3 acres) - an area inundated by 500-year flooding; and Zone X (41.4 acres) - an area determined to be outside the 100-year and 500-year floodplains.

This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

A portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River.

**Comments on Effects to Resources:**

Bridging of the North Fork should be designed in such a way as to avoid filling of the floodplain. In addition, an upland corridor adjacent to the floodplain should be preserved.

Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

vi. Infrastructure

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary

vii. Navigation

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

**Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

b. U.S. Army Corps of Engineers

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The impacts of the project, both direct and indirect, to navigation in the North Fork of the St. Lucie River and the associated waterways will be evaluated. The Corps believes this is a moderate concern because the Corps believes that the proposed bridge will be at a height as to not impede navigation.

**Comments on Effects to Resources:**

Coordination with Coast Guard will be needed by the Corps, and any remaining concerns with the smaller navigable streams and waterways will be considered.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

### **viii. Special Designations**

#### **a. Coordinator – FDOT District 4**

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Special Designations issue for Alternative 3 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Special Designations issue for this project.

**Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

#### **b. U.S. Fish and Wildlife Service**

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Identified Resources and Level of Importance:**

Public Conservation Lands

**Comments on Effects to Resources:**

Corridor Alternative 3 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeastward to Floresta Drive, extends south to Walters Terrace and eastward over the north fork of the St. Lucie River (NFSLR), and connects to Midport Road and continues eastward to U.S. Highway 1. A 2,230-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 3 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f))

Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); A tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

c. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is a designated Aquatic Preserve, an Outstanding Florida Water, and much of the undeveloped uplands adjacent to the River are a state park. Additionally this area is within a Comprehensive Everglades Restoration Plan (CERP) project.

**Comments on Effects to Resources:**

Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.

**Additional Comments (optional):**

The City will need to demonstrate that the project, whichever alternative is chosen, will not be inconsistent with the goals of the CERP project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality is addressed in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**c. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is an Aquatic Preserve and an Outstanding Florida Water.

**Comments on Effects to Resources:**

- The proposed roadway improvements must meet the SFWMD's water quality and water quantity criteria as specified in the Basis of Review for Environmental Resource Permit Applications.
- If the proposed project is greater than 40% impervious, the surface water management system will need to provide at least 1/2-inch of dry detention or retention pre-treatment.
- Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.
- The proposed bridge should be designed to direct all storm water runoff through the surface water management system. Please be advised that the use of scuppers and water quality mitigation are not acceptable alternatives.
- Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Additional Comments (optional):**

Dewatering activities, if any, will require a water use permit.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

**d. U.S. Environmental Protection Agency**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFS LAP).

**Comments on Effects to Resources:**

Alternative #3 is likely to introduce substantial impact on water quality due to contaminant loading as well as water flow caused by storm water management for the proposed alignment. The EIS should analyze and quantify this impact. From information available to date, it is likely that Alternative #3 would have more impact on water quality and quantity than Alternative #4.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**x. Wetlands**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wetlands issue for Alternative 3 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wetlands issue for this project.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

**b. National Marine Fisheries Service**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon.

Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

**Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

**Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

Avoidance:

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

Minimization:

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

Mitigation:

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

Where Comment is Addressed in Document: Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

c. U.S. Fish and Wildlife Service

Degree of Effect: 5 Dispute Resolution

Dispute Justification:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannas Preserve State

Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 3 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward to Floresta Drive, extends south to Walters Terrace, crosses the north fork of the St. Lucie River (NFSLR), and connects to Midport Road. A 2,230-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and strongly urge that it be eliminated from further consideration.

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

**d. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The wetlands within the potential alignment area are of high quality and are within and adjacent to the North Fork of the St. Lucie River Aquatic Preserve. The District and other agencies have committed resources to preserve and restore the North Fork and the associated flood plain as part of the Comprehensive Everglades Restoration Plan (CERP). Additionally, all of the alignments will cross state-owned sovereign submerged lands.

**Comments on Effects to Resources:**

Direct fill impacts as a result of bridge approaches, water management system infrastructure, pilings, etc, to wetlands are anticipated as a result of this alignment. The value of adjacent wetlands to wildlife may also be adversely affected. Adverse impacts to the functions of these high-quality wetlands should be reduced and eliminated through alignment alternatives and engineering design. The permit application should contain a thorough analysis of reduction and elimination of wetland impacts, including the rationale for selecting the preferred alignment and rejecting alternative options.

Once elimination and reduction of impacts has been achieved, mitigation should occur within the North Fork system. Staff recommends early coordination with staff of the Florida Department of Environmental Protection - Office of Coastal Aquatic Managed Areas, St. Lucie County, and the SFWMD to identify mitigation options, such as the purchase and restoration of oxbows within the North Fork system and/or mitigation options associated with Platts Creek or Ten-Mile Creek.

**Additional Comments (optional):**

Lands (wetland and upland) within the Preserve that will be utilized for this project will require a land swap with the Board of Trustees of the Internal Improvement Trust Fund and/or a public easement over the sovereign submerged lands. The schedule for completing this project should reflect the necessary time for consideration by the Board of Trustees (i.e., the Governor and Cabinet).

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory

Mitigation); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains).

e. U.S. Army Corps of Engineers

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

Wetlands and waters of the U.S. - this area has an extremely high level of importance to the Corps. This area of the North Fork of the St. Lucie River has preserved vegetative buffers surrounding it, which would be impacted by the bridge.

Comments on Effects to Resources:

Direct impacts as well as shading impacts will need to be quantified and assessed. Avoidance and minimization must be demonstrated. The FDOT may want to UMAM the site to determine the function and value of the wetlands and waters of the U.S.. A comparison of UMAM scores from each river crossing may help determine (at least in one aspect) the least environmentally damaging alternative. Other factors will be considered as discussed below.

Additional Comments (optional):

The Corps has the same comments on each alternative. Once we have had the opportunity to look at the alternatives analysis and the history of the project in house, I will be able to provide more specific comments on each alternative. For now, I believe I can only comment on what we will be evaluating and the concerns with the wetland and water impacts, as well as public interest factors. The Corps will also take into consideration public interest factors. This includes the effects the work might have on conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, land use, navigation, shore erosion and accretion, recreation, water quality, safety, and consideration of property ownership.

We will need to evaluate each criterion separately with each alternative. I believe that several factors would be negatively affected by this project. We need to make sure that the negative effects would not be unacceptable.

Where Comment is Addressed in Document: Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

f. FL Department of Environmental Protection

Degree of Effect: 4 Substantial

Coordination Document:

Permit Required

Identified Resources and Level of Importance:

- The proposed project area encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP) and Savannas Preserve State Park (SPSP), both designated Outstanding Florida Waters.
- The EST indicates that there are 49.66 acres of estuarine and 1.56 acres of palustrine wetlands within the 500-foot buffer zone of the project.
- The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification for each alternative is: 3.21, 0.08, 37.56, 16.14, 268.95, 285.10, 9.02, 21.13, 3.47 and 26.17 acres of cypress, mixed cypress, freshwater marsh, mangrove swamp, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands, wet prairies and mixed wetland forest respectively.
- Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP and SPSP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

Comments on Effects to Resources:

An analysis of existing river crossings should be conducted to determine whether the widening of existing bridges would achieve the objectives sought by the City. FDOT studies have not previously supported the need for a third river crossing. The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.

- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands and uplands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve and state park must be presented to the Trustees for a determination of the parkway's compatibility with the conservation and preservation purposes for which the lands were acquired. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSRAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve and state park have been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection 40E-4.302(1) (a), F.A.C. Reasonable assurance has not been provided that the proposed activity will be "clearly in the public interest" upon weighing and balancing the factors stated in subsection 40E-4.302(1) (a), F.A.C. The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under. As proposed, the activity does not appear to meet the Conditions for Issuance or Additional Conditions for Issuance for an ERP under Part IV of Chapter 373, F.S., and Sections 40E-4.301 and 40E-4.302, F.A.C., because the applicant has not provided reasonable assurances that:

- (a) The proposed activity will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- (b) The proposed activity will not adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- (c) The proposed activity will not adversely affect the relative value of functions being performed by areas affected by the proposed regulated activity;
- (d) The proposed activity will not adversely affect the quality of receiving waters so that the special water quality standards for Outstanding Florida Waters will be met; and
- (e) The proposed activity located in, on, or over wetlands or other surface waters, will be clearly in the public interest.

**Additional Comments (optional):**

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. Until the Department has an opportunity to evaluate more detailed information on the proposed project and related projects in the I-95-to-Hutchinson Island corridor and their effects on aquatic preserves, state parks, wetlands, and surface water quality, the Department cannot support the project or evaluate its consistency with the Florida Coastal Management Program. The scope and magnitude of the proposed roadway improvements dictates that the applicant comply with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements by evaluating the anticipated environmental impacts at logical termini. It is therefore recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

To avoid crossing the NFSRAP and SPSP, the City needs to identify alternatives to the proposed bridge construction, including land use changes and modification of existing transportation system components. The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. If another east-west corridor to Hutchinson Island is justified, the team should also determine the location that minimizes impacts to environmental resources. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources because of their recreational (and other) values; Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); the

location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

g. U.S. Environmental Protection Agency

Degree of Effect: 4 Substantial

Comments on Effects to Resources:

Impact on wetlands is significant. An EIS must thoroughly consider a no-build option and an option to increase the capacity of existing facilities. Should these options be proven ineffective, avoidance and minimization of impact must be optimized.

Where Comment is Addressed in Document: Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in Section 3.0 (Alternatives Including Proposed Action)..

xi. Wildlife and Habitat

a. Coordinator – FDOT District 4

Degree of Effect: 5 Dispute Resolution

Comments:

The Wildlife and Habitat issue for Alternative 3 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wildlife and Habitat issue for this project.

Commitments and Responses:

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

Where Comment is Addressed in Document: The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. U.S. Fish and Wildlife Service

Degree of Effect: 5 Dispute Resolution

Dispute Justification:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and urge that it be eliminated from further consideration.

Recommended Actions for Dispute:

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

Comments on Effects to Resources:

Service Comments, Federally Listed Species:

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

### Wood Stork

All the proposed project corridor alternatives are located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

### West Indian Manatee

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic- Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800- DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1- 800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, bald eagle (*Haliaeetus leucocephalus*), West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/Species\\_lists/PDF-lists/St.LucieCounty.pdf](http://www.fws.gov/verobeach/Species_lists/PDF-lists/St.LucieCounty.pdf)).

Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

### Service Comments, Fish and Wildlife Resources, Wetlands, and Special Designations:

Corridor Alternative 3 begins at the intersection of the Crosstown Parkway and Manth Lane, extends eastward to Floresta Drive, extends south to Walters Terrace, crosses the north fork of the St. Lucie River (NFSLR), and connects to Midport Road. A 2,230-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR.

These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 3 for the project and strongly urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 3 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

**c. FL Fish and Wildlife Conservation Commission**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

**Fish and Wildlife and Habitat Resources**

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map. Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and

cumulative effects: Atlantic hawksbill (E), loggerhead turtle (T), green sea turtle (E), Kemp's ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Sherman's fox squirrel (SSC), Florida mouse (SSC), Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

#### **Comments on Effects to Resources:**

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Public conservation lands of the Savannas Preserve State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

#### **Additional Comments (optional):**

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3). In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives.

While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.
2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals, amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.
4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation

easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.

5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.
6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

**Where Comment is Addressed in Document:** Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation). The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

## B. Cultural

### i. Historical and Archaeological

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

**Commitments and Responses:**

Preparation of a Cultural Resource Assessment Survey will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

b. Miccosukee Tribe

**Degree of Effect:** 0 None

**Comments on Effects to Resources:**

None as this alternative is being discarded.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

c. FL Department of State

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building

500 South Bronough Street

Tallahassee, FL 32399-0250

(850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Coordination Document:**

Permit Required

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSLAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). Additionally, FDOT should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across both the NFSLAP and SPSP.

**Additional Comments (optional):**

Under Article X, Section 18 of the Florida Constitution (as amended in 1998), dispositions of state-owned conservation lands are restricted to those lands "no longer needed for conservation purposes." If the proposed parkway/bridge construction activities necessitate right-of-way expansion, the FDOT will need to request that the Board of Trustees of the Internal Improvement Trust Fund determine whether the subject properties are no longer needed for conservation purposes.

This requirement must be met before the conveyance of these lands can proceed. In addition, please be advised that proposals to utilize state conservation lands may be required to meet the guidelines of the state's linear facility policy, POLICY Use of Natural Resource Lands by Linear Facilities as Approved by Board of Trustees of the Internal Improvement Trust Fund on January 23, 1996.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

**c. Federal Highway Administration**

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**iii. Section 4(f) Potential**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 3 Moderate

**Comments:**

The EST GIS analysis results indicate that this alignment is located near conservation land. For these reasons, and based on agency comments, a Summary DOE of Moderate has been assigned to the Section 4(f) Potential issue for this alternative. Due to the significance of the noted recreational feature, a Section 4(f) Determination of Applicability will be required.

The final design for this alignment will avoid or minimize impacts to this area to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

**b. Federal Highway Administration**

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

Where Comment is Addressed in Document: The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

C. Community

i. Aesthetics

a. Coordinator – FDOT District 4

Degree of Effect: 2 Minimal

Comments:

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; however, extensive public involvement will need to be conducted in order to determine the desired aesthetic enhancements. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Aesthetics issue for this alternative.

Where Comment is Addressed in Document: Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Identified Resources and Level of Importance:

In observation of the neighboring communities, an extensive public involvement plan is needed during the project development phase.

Comments on Effects to Resources:

Coordination and input from the public, the City of Port St. Lucie and St. Lucie County is important to determine the desired aesthetic enhancements.

Where Comment is Addressed in Document: Sociocultural effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

ii. Economic

a. Coordinator – FDOT District 4

Degree of Effect: 2 Minimal

Comments:

According to agency comments, this project is anticipated to have minimal impacts on economic resources within the area. As such, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative.

Where Comment is Addressed in Document: Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Comments on Effects to Resources:

No significant economic resources are located in proximity to this project.

Where Comment is Addressed in Document: No response required.

iii. Land Use

a. Coordinator – FDOT District 4

Degree of Effect: 3 Moderate

Comments:

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

Where Comment is Addressed in Document: Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

This project is compatible with local growth management policies and adopted land use plans.

**Comments on Effects to Resources:**

This project is included in the MPO's five-year Transportation Improvement Program (TIP).

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. FL Department of Community Affairs

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

iv. Mobility

a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

According to agency comments, this alignment is not the best in terms of addressing traffic flow. The facility, however, is still anticipated to enhance travel during emergency evacuation periods, enhance overall public safety, and improve accessibility and connectivity between communities located at the project termini. For these reasons, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Identified Resources and Level of Importance:**

Providing bike lanes, widening sidewalks to 6, and 12 standard width lanes will enhance mobility.

The Third East-West River Crossing (Crosstown Parkway Extension) is a transportation route critical to coastal evacuation. The project will help to enhance public safety, mobility, and accessibility, over the long term, for the residents of the communities at each end of the project.

**Comments on Effects to Resources:**

Although Alternative 3 (2D) will enhance mobility, this is not the best alternative concerning traffic flow. Traffic congestion is anticipated at the intersection of Floresta Drive and Walters Terrace.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

v. Relocation

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely relocate 97 residences and 2 community facilities as it will require additional right-of-way. Impacts to community cohesion are anticipated to be high due to the number of residential relocations required. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Relocation issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The project will require 97 residential relocations and 2 community facility relocations.

All four alternative alignments will require 6 lanes. At the present time this is a 2 lane road through low and medium density residential areas. This corridor will go through these residential communities and a significant displacement of residences is expected.

**Comments on Effects to Resources:**

Alternative 3(2D) anticipates Right of Way acquisition. This alternative has a high level of Community Cohesion impacts and requires a great number of residential relocations.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, impacts to residential areas in the project vicinity are expected to be substantial due to the fact that this alternative is anticipated to require a large amount of right-of-way. In addition, there is potential for surrounding communities to express strong opposition to this project. For these reasons, a Summary DOE of Substantial has been assigned to the Social issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- The proposed Crosstown Parkway project will require a bridge crossing over the North Fork of the St. Lucie River.
- The east end of the project at U.S 1 is bordered by single family homes on both sides and mainly commercial areas at the Walton Rd. and U.S. 1 intersection.
- The proposed alignment will significantly impact the social characteristics of the surrounding neighborhoods.
- There will be displacement of population due to this project.
- The project anticipates a large number of right of way acquisitions.
- This alternative will impact residential areas

**Comments on Effects to Resources:**

- To the west of the North Fork St. Lucie River the community will be significantly affected with this alternative because of the residential relocations.
- Communities surrounding the project may have diverse and strong opinions in regard to this project.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); relocations are addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

c. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

D. Secondary and Cumulative

i. Secondary and Cumulative Effects

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Coordination Document:**

Permit Required

**Comments on Effects:**

The North Fork St. Lucie Aquatic Preserve (NFSAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. The project's potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor between West Virginia Drive and I-95 and the Florida Turnpike, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see

pages 9-10). The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor between I-95 and Hutchinson Island. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP, SPSP, Indian River Lagoon Aquatic Preserve, and surrounding communities is necessary.

The EIS should consider secondary and cumulative impacts that may result from additional development on Hutchinson Island if the proposed bridge is built. Items that should be evaluated include: stormwater runoff from increased impervious surfaces, impacts to listed species resulting from increased development and human activity on the island, and conflicts with the Coastal Barrier Resource Act. The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the proposed re-routing of I-95 and Turnpike traffic through the City.

The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other projects in the I-95-to-Hutchinson Island corridor comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. U.S. Army Corps of Engineers

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Secondary and cumulative effects include, but not limited to impacts changes in public use of the canoe launch adjacent to U.S. 1 near Village Green/Walton area, additional bridges proposed to be constructed in the area (north and south) as well as across the Indian River, and any impacts to the changes in function and value to the North Fork of the St. Lucie River.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Once we select the least damaging practicable alternative, the Corps would then assess on-site avoidance and minimization. Mitigation comes once all others are achieved. UMAM would be the appropriate functional analysis, unless the FDOT is intending to mitigate at a bank. Bear point assesses function and value with eWRAP. The FDOT should also consider possibly purchasing lands along the North Fork of the St. Lucie River and donating to the state as mitigation to offset the loss of use, if any, to the public canoe launch.

**Recommended Actions to Improve At-Risk Resources:**

Measures taken to minimize impacts to the river should be considered with the design of the bridge to minimize runoff into the river, slopes of the shoreline, and wildlife corridors. Water quality improvements to areas that discharge into the North Fork of the St. Lucie River can be considered as a recommended action if improved, as well as donating sensitive lands or credits at a bank.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

d. FL Fish and Wildlife Conservation Commission

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts could be substantial for all four alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access. Water quality could be reduced, and increased siltation might occur due to runoff from the proposed road. Increased roadkills for many species may also occur, including bird, mammal, amphibian, and reptile species listed by FWC.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

We recommend that the Class of Action on this project be an Environmental Impact Statement (EIS) due to the potential adverse direct and secondary impacts that would result in substantial and irreversible impacts to natural resources.

**Recommended Actions to Improve At-Risk Resources:**

We request that FDOT fully and adequately address the No Build Alternative during the upcoming Project Development and Environmental Study (PD&E), and search for ways to resolve this issue with reduced impacts to important and irreplaceable natural systems.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

e. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts would be substantial for all four alignments, and may include secondary impacts due construction methods, reduced value of adjacent land to wildlife due to traffic and human use, and the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Secondary and cumulative impacts to wetlands and wildlife must be addressed during the permitting process through reduction and elimination and mitigation for unavoidable impacts. Project modifications may be required to reduce or eliminate species impacts in accordance with the wildlife agencies. Mitigation plans may require special consideration of the needs of wildlife species impacted by the project.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

f. FL Department of State

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

#### 4. Alternative 4/6A

##### A. Natural

##### i. Air Quality

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

##### b. U.S. Environmental Protection Agency

**Degree of Effect:** 0 None

**Comments on Effects to Resources:**

Based on data available, no significant impact on air quality has been identified.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

##### ii. Coastal and Marine

##### a. Coordinator – District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 6.0 acres of coastal wetlands, 1.2 acres of natural river, and 220.6 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. While Alternative 4 will likely result in significant impacts to wetlands, it will result in the least amount of impacts to area resources overall (as compared to the other proposed alternatives). Based on the foregoing, a Summary DOE of Moderate has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

##### b. National Marine Fisheries Service

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon.

Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Site

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, the 500-foot project buffer contains two Super Act Risk Sources; four FDEP regulated and unregulated storage tanks, and one hazardous waste site. No geocoded dry cleaners, geocoded gas stations, National Priority List sites, nuclear sites, solid waste facilities, Superfund hazardous waste sites, or Toxic Release Inventory sites are present within this buffer. Based on these findings and agency comments, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.
- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.

- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C.
- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>
- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### iv. Farmlands

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

##### b. Natural Resources Conservation Service

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

There are no Prime and/or Unique Farmland soils within Alternative 4 of Project #8247.

**Comments on Effects to Resources:**

Therefore, no effects to Farmland Resources.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

#### v. Floodplains

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (10.8 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (2.8 acres) - an area inundated by 500-year flooding; and Zone X (37.3 acres) - an area determined to be outside the 100-year and 500-year floodplains.

This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

##### b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

A portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River.

**Comments on Effects to Resources:**

Bridging of the North Fork should be designed in such a way as to avoid filling of the floodplain. In addition, an upland corridor adjacent to the floodplain should be preserved.

Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**vi. Infrastructure**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary.

**vii. Navigation**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

**Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

**viii. Special Designations**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 4 Substantial

**Reviewed By:**

FDOT District 4 (9/22/2008)

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Special Designations issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality is addressed in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

**b. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is a designated Aquatic Preserve, an Outstanding Florida Water, and much of the undeveloped uplands adjacent to the River are a state park. Additionally this area is within a Comprehensive Everglades Restoration Plan (CERP) project.

**Comments on Effects to Resources:**

Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.

**Additional Comments (optional):**

The City will need to demonstrate that the project, whichever alternative is chosen, will not be inconsistent with the goals of the CERP project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality is addressed in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - and the Savannas Preserve State Park - a designated Outstanding Florida Water - are located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. South Florida Water Management District

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork of the St. Lucie River is an Aquatic Preserve and an Outstanding Florida Water.

**Comments on Effects to Resources:**

- The proposed roadway improvements must meet the SFWMD's water quality and water quantity criteria as specified in the Basis of Review for Environmental Resource Permit Applications.
- If the proposed project is greater than 40% impervious, the surface water management system will need to provide at least 1/2-inch of dry detention or retention pre-treatment.
- Since the proposed project will discharge directly into an Outstanding Florida Water/Aquatic Preserve, the proposed surface water management system design will need to include reasonable anti-degradation assurances. Typically, this is accomplished by providing 150% of the standard water quality treatment.
- The proposed bridge should be designed to direct all storm water runoff through the surface water management system. Please be advised that the use of scuppers and water quality mitigation are not acceptable alternatives.
- Since a portion of the proposed project will be located within the 100-year flood plain for the North Fork of the St. Lucie River, the post-development scenario must provide equal or greater compensating flood storage than the pre-development scenario.

**Additional Comments (optional):**

Dewatering activities, if any, will require a water use permit.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. U.S. Environmental Protection Agency

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP)

**Comments on Effects to Resources:**

Alternative #4 is likely to impact water quality and water flow. Data available to date indicates that this alternative is likely to have less impact compared to other alternative alignments. A thorough analysis of impact on water quality and flow resulting from this alignment must be conducted in the EIS.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

d. FL Department of Environmental Protection Agency

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

x. Wetlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the National Wetlands Inventory GIS database, approximately 10.1 acres (19.9%) of estuarine wetlands and 0.3 acres (0.6%) of palustrine wetlands compose the 100-foot project buffer. The Wetlands 2000 database reports 2.9 acres (5.7%) of mixed shrub wetlands and approximately 6.0 acres (11.8%) of mixed wetland hardwoods within the same buffer area. In addition, this alternative is located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) – a designated Outstanding Florida Water and Class III Water Body. Based on the foregoing, as well as agency comments, a Summary DOE of Substantial has been assigned to the Wetlands issue for this alternative.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands).

b. U.S. Fish and Wildlife Service

Degree of Effect: 4 Substantial

Comments on Effects to Resources:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. Corridor Alternative 4 would result in significant impacts to wetlands and fish and wildlife habitat. The project is also located within lands proposed to be acquired in association with the Comprehensive Everglades Restoration Project (North Fork Buffer Preserve component of the Indian River Lagoon - South Project).

However, the Service believes that Corridor Alternative 4 is preferable to the all other corridor alternatives proposed except the No-Build alternative. If this alternative is selected, the Service recommends that adequate compensation be provided to offset the impacts of the project to wetlands and fish and wildlife. Furthermore, the project should be designed to minimize impacts to wetlands and reduce shading to native vegetation to the greatest extent practicable. This would include a bridge design that spans the entire flood plain of the NFSLR.

Where Comment is Addressed in Document: Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. FL Department of Environmental Protection

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

The proposed project area encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP), designated Outstanding Florida Waters. The EST indicates that there are 50.22 acres of estuarine and 5.39 acres of palustrine wetlands within the 500-foot buffer zone of the project.

The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification for each alternative is: 55.16, 251.53, 208.76, 5.47, 59.83 and 3.47 acres of freshwater marsh, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands and wet prairies, respectively. Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

Comments on Effects to Resources:

The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve must be presented to the Trustees for a determination of the parkway's compatibility with the conservation purposes for which the lands were designated. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSLAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve has been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in

Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection 40E-4.302(1) (a), F.A.C.

The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under.

**Additional Comments (optional):**

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. It is recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

Please contact Mr. Chris Stahl (phone - 850/245-2169) for further information and assistance.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

**d. U.S. Environmental Protection Agency**

**Degree of Effect:** 4 Substantial

**Comments on Effects to Resources:**

Impact on wetlands is significant. An EIS must thoroughly consider a no-build option and an option to increase the capacity of existing facilities. Should these options be proven ineffective, avoidance and minimization of impact must be optimized. Alternative 4 seems to be the least impactful in terms of wetland acreage impacted.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**e. National Marine Fisheries Service**

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane

(*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper

complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gillmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.

- d. Plans for the long-term protection and maintenance of the mitigation area(s).
- e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

f. South Florida Water Management District

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The wetlands within the potential alignment area are of high quality and are within and adjacent to the North Fork of the St. Lucie River Aquatic Preserve. The District and other agencies have committed resources to preserve and restore the North Fork and the associated flood plain as part of the Comprehensive Everglades Restoration Plan (CERP). Additionally, all of the alignments will cross state-owned sovereign submerged lands.

**Comments on Effects to Resources:**

Direct fill impacts as a result of bridge approaches, water management system infrastructure, pilings, etc., to wetlands are anticipated as a result of this alignment. The value of adjacent wetlands to wildlife may also be adversely affected. Adverse impacts to the functions of these high-quality wetlands should be reduced and eliminated through alignment alternatives and engineering design. The permit application should contain a thorough analysis of reduction and elimination of wetland impacts, including the rationale for selecting the preferred alignment and rejecting alternative options. Alternative 4 appears to have the least impact to wetlands based on the information provided.

Once elimination and reduction of impacts has been achieved, mitigation should occur within the North Fork system. Staff recommends early coordination with staff of the Florida Department of Environmental Protection - Office of Coastal Aquatic Managed Areas, St. Lucie County, and the SFWMD to identify mitigation options, such as the purchase and restoration of oxbows within the North Fork system and/or mitigation options associated with Platts Creek or Ten-Mile Creek.

**Additional Comments (optional):**

A public easement from the Board of Trustees of the Internal Improvement Trust Fund will be required to construct the bridge over state-owned sovereign submerged lands.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

g. U.S. Army Corps of Engineers

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Wetlands and waters of the U.S. - this area has an extremely high level of importance to the Corps. This area of the North Fork of the St. Lucie River has preserved vegetative buffers surrounding it, which would be impacted by the bridge.

**Comments on Effects to Resources:**

Direct impacts as well as shading impacts will need to be quantified and assessed. Avoidance and minimization must be demonstrated. The FDOT may want to UMAM the site to determine the function and value of the wetlands and waters of the U.S.. A comparison of UMAM scores from each river crossing may help determine (at least in one aspect) the least environmentally damaging alternative. Other factors will be considered as discussed below.

**Additional Comments (optional):**

The Corps will also take into consideration public interest factors. This includes the effects the work might have on conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, land use, navigation, shore erosion and accretion, recreation, water quality, safety, and consideration of property ownership. We will need to evaluate each criterion separately with each alternative. I believe that several factors would be negatively affected by this project. We need to make sure that the negative effects would not be unacceptable.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

xi. Wildlife and Habitat

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following wildlife and habitat features within the 100-foot project buffer: the Allapattah Flats Ecosystem Management Area, the North Fork St Lucie River Aquatic Preserve, and a Strategic Habitat and Conservation Area for the Florida scrub jay. The Savannas Preserve State Park is located within the 200-foot project buffer. For these reasons, and due to agency concerns, a Summary DOE of Substantial has been assigned to the Wildlife and Habitat issue for this alternative.

**Commitments and Responses:**

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. FL Fish and Wildlife Conservation Commission

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

**Fish and Wildlife and Habitat Resources**

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannas Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map.

Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and cumulative effects: Atlantic hawksbill (E), loggerhead turtle (T), green sea turtle (E), Kemps ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Shermans fox squirrel (SSC), Florida mouse (SSC), Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

#### **Comments on Effects to Resources:**

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Pubic conservation lands of the Savannas Preserve State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

#### **Additional Comments (optional):**

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3).

In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives. While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.
2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals,

amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.

4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.
5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.
6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Terry Gilbert at (850) 402-6311 or email [terry\\_gilbert@urscorp.com](mailto:terry_gilbert@urscorp.com) to initiate the process for agency coordination on this project.

**Where Comment is Addressed in Document:** Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands Impacts) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation). The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

c. U.S. Fish and Wildlife Service

Degree of Effect: 4 Substantial

Comments on Effects to Resources:

Service Comments, Federally Listed Species:

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

Wood Stork

All the proposed project corridor alternatives are located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

West Indian Manatee

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic- Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800- DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard,

Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, bald eagle (*Haliaeetus leucocephalus*), West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/Species\\_lists/PDF-lists/St.LucieCounty.pdf](http://www.fws.gov/verobeach/Species_lists/PDF-lists/St.LucieCounty.pdf)).

Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Service Comments, Fish and Wildlife Resources, Wetlands, and Special Designations:

Corridor Alternative 4 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive, turns north at Floresta Drive through an existing neighborhood to just north of Hidden River Drive, extends eastward and crosses the north fork of the St. Lucie River (NFSLR), and connects to U.S. Highway 1 at Savannah Club Boulevard. A 2,100-foot bridge would be required to span the NFSLR. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. Corridor Alternative 4 would result in significant impacts to wetlands and fish and wildlife habitat. The project is also located within lands proposed to be acquired in association with the Comprehensive Everglades Restoration Project (North Fork Buffer Preserve component of the Indian River Lagoon - South Project).

However, the Service believes that Corridor Alternative 4 is preferable to the all other corridor alternatives proposed except the No-Build alternative. If this alternative is selected, the Service recommends that adequate compensation be provided to offset the impacts of the project to wetlands and fish and wildlife. Furthermore, the project should be designed to minimize impacts to wetlands and reduce shading to native vegetation to the greatest extent practicable. This would include a bridge design that spans the entire flood plain of the NFSLR.

Where Comment is Addressed in Document: Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

**B. Cultural**

**i. Historical and Archaeological**

**a. Coordinator – FDOT District 4**

Degree of Effect: 3 Moderate

Comments:

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

Commitments and Responses:

Preparation of a Cultural Resource Assessment Survey will be included in the scoping recommendations for this project.

Where Comment is Addressed in Document: Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

**b. Miccosukee Tribe**

Degree of Effect: 3 Moderate

Identified Resources and Level of Importance:

Due to the location at the NFSLR, a Cultural Resources Survey needs to be done. One was not included in the uploaded documents. Once this is done and a copy sent to me, then this issue can be resolved.

Comments on Effects to Resources:

Not known at this time until sufficient information is provided.

Where Comment is Addressed in Document: Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

c. FL Department of State

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building

500 South Bronough Street

Tallahassee, FL 32399-0250

(850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). Additionally, FDOT

should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across the NFS LAP.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

iii. Section 4(f) Potential

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

The EST GIS analysis results indicate that this alignment is located near conservation land. For these reasons, and based on agency comments, a Summary DOE of Moderate has been assigned to the Section 4(f) Potential issue for this alternative. Due to the significance of the noted recreational feature, a Section 4(f) Determination of Applicability will be required. The final design for this alignment will avoid or minimize impacts to this area to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Savannas Preserve State Park

**Comments on Effects to Resources:**

This FNAI land is located near the project. The project must be developed to avoid or minimize impacts to this property.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

C. Community

i. Aesthetics

a. Coordinator – FDOT District 4

**Degree of Effect:** 2 Minimal

**Comments:**

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; however, extensive public involvement will need to be conducted in order to determine the desired aesthetic enhancements. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Aesthetics issue for this alternative.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

In observation of the neighboring communities, an extensive public involvement plan is needed during the project development phase.

**Comments on Effects to Resources:**

Coordination and input from the public, the City of Port St. Lucie and St. Lucie County is important to determine the desired aesthetic enhancements.

**Where Comment is Addressed in Document:** Sociocultural effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section

5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

ii. Economic

a. Coordinator – FDOT District 4

Degree of Effect: 2 Minimal

Comments:

According to agency comments, this project is anticipated to have minimal impacts on economic resources within the area. As such, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative.

Where Comment is Addressed in Document: Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

b. St. Lucie TPO

Degree of Effect: 2 Minimal

Comments on Effects to Resources:

No significant economic resources are located in proximity to this project.

Where Comment is Addressed in Document: No response required.

iii. Land Use

a. Coordinator – FDOT District 4

Degree of Effect: 3 Moderate

Comments:

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

Where Comment is Addressed in Document: Land use changes (including the Coastal High hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

b. FL Department of Community Affairs

Degree of Effect: 3 Moderate

Identified Resources and Level of Importance:

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

Where Comment is Addressed in Document: Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

This project is compatible with local growth management policies and adopted land use plans.

**Comments on Effects to Resources:**

This project is included in the MPO's five-year Transportation Improvement Program (TIP).

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

iv. Mobility

a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

Based on agency comments, this alignment will serve as a critical transportation route during emergency evacuation periods. The project is also anticipated to enhance public safety, as well as improve accessibility and connectivity between communities located at the project termini. For these reasons, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Identified Resources and Level of Importance:**

Providing bike lanes, widening sidewalks to 6, and 12 standard width lanes will enhance mobility.

**Comments on Effects to Resources:**

The Third East-West River Crossing (Crosstown Parkway Extension) is a transportation route critical to coastal evacuation. The project will help to enhance public safety, mobility, and accessibility, over the long term, for the residents of the communities at each end of the project.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

v. Relocation

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely relocate 75 residences and 6 community facilities as it will require additional right-of-way. It was noted that while Alternative 4 will result in a great number of residential and commercial relocations, it will likely have moderate impacts on community cohesion.

Based on agency comments and the number of potential relocations that could occur as a result of the project, a Summary DOE of Substantial has been assigned to the Relocation issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- The project will require 75 residential and 6 commercial relocations but does not have any impact to community facilities.
- All four alternative alignments will require 6 lanes. At the present time this is a 2 lane road through low and medium density residential areas to the west, and a mobile home neighborhood and commercial to the east at U.S.1 and Savanna Club Blvd. This corridor will go through these residential communities and displacement of residences and businesses is expected.

**Comments on Effects to Resources:**

Alternative 4(6A) anticipates Right of Way acquisition. This alternative has a medium level of Community Cohesion impacts, but impacts a great number of residential and commercial properties.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, impacts to residential areas in the project vicinity are expected to be substantial due to the fact that this alternative is anticipated to require a large amount of right-of-way. In addition, there is potential for surrounding communities to express strong opposition to this project. For these reasons, a Summary DOE of Substantial has been assigned to the Social issue for this alternative. The FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

c. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- The proposed Crosstown Parkway project will require a bridge crossing over the North Fork of the St. Lucie River.
- This alternative will impact residential areas.
- The project anticipates a large number of right of way acquisitions.
- The proposed alignment will significantly impact the social characteristics of the surrounding neighborhoods.
- There will be displacement of population and businesses due to this project.

**Comments on Effects to Resources:**

- The east end of the project at U.S 1 is adjacent to La Buona Vita Village, a mobile home community and will be impacting businesses located at Lakes Plaza on the south west corner of the intersection of Savanna Club Blvd. and U.S. 1.
- To the west of the North Fork St. Lucie River the community will be significantly affected with this alternative because of the residential relocations from Hidden River Dr. to Floresta Dr.
- Communities surrounding the project may have diverse and strong opinions in regard to this project.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); relocations are addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

**D. Secondary and Cumulative**

**i. Secondary and Cumulative Effects**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 4 Substantial

**Comments:**

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

**b. FL Department of Environmental Protection**

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. The project's potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor along West Virginia Drive - Walton Road, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural predevelopment hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP and surrounding communities, and near the SPSP and Indian River Lagoon Aquatic Preserve, is necessary. Items that should be evaluated include: stormwater runoff from increased impervious surfaces and impacts to listed species resulting from increased development and human activity.

The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the re-routing of I-95 and Turnpike traffic through the City. The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other related projects comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

**c. South Florida Water Management District**

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts would be substantial for all four alignments, and may include secondary impacts due construction methods, reduced value of adjacent land to wildlife due to traffic and human use, and the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Secondary and cumulative impacts to wetlands and wildlife must be addressed during the permitting process through reduction and elimination and mitigation for unavoidable impacts. Project modifications may be required to reduce or eliminate species impacts in accordance with the wildlife agencies. Mitigation plans may require special consideration of the needs of wildlife species impacted by the project.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

d. U.S. Army Corps of Engineers

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Secondary and cumulative effects are the same for Alternative 3. They would include things as other bridges proposed to be constructed in the vicinity, including in the North Fork of the St. Lucie River, the South Fork of the St. Lucie River and the Indian River. Changes in water usage in the canoe launch, and changes in the overall function and value of the River.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

The Corps would need to evaluate each alternative separately with a lot more information to provide specific avoidance, minimization and mitigation measures. After adequate alternatives analysis, the Corps would then evaluate the on site avoidance and minimization. Once satisfied, then the Corps can assess mitigation. The Corps can evaluate different mitigation options, anywhere from on-site improvements, offsite improvements, offsite land donation, or offsite at a bank.

**Recommended Actions to Improve At-Risk Resources:**

Alternative analysis will look at all at-risk resources. Once we can evaluate the alternatives analysis, we can provide better recommendations. For now, I recommend looking at avoiding mangroves as much as possible, and upland islands that provide a safe habitat for nesting birds and other aquatic species (such as turtles, frogs, alligators...). Public parks and access areas should also be avoided as much as possible.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

e. FL Department of State

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

f. FL Fish and Wildlife Conservation Commission

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

Secondary and cumulative impacts could be substantial for all four alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access. Water quality could be reduced, and increased siltation may occur due to runoff from the proposed road. Increased roadkills for many species could also occur, including bird, mammal, amphibian, and reptile species listed by FWC.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

We recommend that the Class of Action on this project be an Environmental Impact Statement (EIS) due to the potential adverse direct and secondary impacts that would result in substantial and irreversible impacts to natural resources.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis (including the No Build Alternative) is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

5. Alternative 5/6B

A. Natural

i. Air Quality

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

ii. Coastal and Marine

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 2.0 acres of coastal wetlands, 3.1 acres of natural river, and 624.6 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. For these reasons and based on agency comments, a Summary DOE of Substantial has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane

(*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes. Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that

includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon.

Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, there are no geocoded dry cleaners, geocoded gas stations, geocoded petroleum tanks, hazardous waste sites, National Priority List sites, nuclear sites, solid waste facilities, Brownfields, Superfund hazardous waste sites, or Toxic Release Inventory sites located within the 500-foot project buffer. Based on agency comments, however, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.
- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.
- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C. -- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>
- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

iv. Farmlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

b. National Resources Conservation Service

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

There are no Prime and/or Unique Farmland soils within Alternative 4 of Project #8247.

**Comments on Effects to Resources:**

Therefore, no effects to Farmland Resources.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

v. Floodplains

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (15.0 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (0.9 acres) - an area inundated by 500-year flooding; and Zone X (30.7 acres) - an area determined to be outside the 100-year and 500-year floodplains.

This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

vi. Infrastructure

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary.

vii. Navigation

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

**Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

viii. Special Designations

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Special Designations issue for Alternative 5 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Special Designations issue for this project.

**Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels northeast across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues east across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided.

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area.

Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 5 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing

and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); A tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

x. Wetlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wetlands issue for Alternative 5 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wetlands issue for this project.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels northeast across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues east across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration.

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

c. **National Marine Fisheries Service**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

**Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

**Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

**Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.

- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

Minimization:

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

Mitigation:

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.).

In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

Where Comment is Addressed in Document: Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

**d. FL Department of Environmental Protection**

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

The area for the six proposed alternatives encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP) and Savannas Preserve State Park (SPSP), both designated Outstanding Florida Waters.

The EST indicates that there are 43.3 acres of estuarine and 11.8 acres of palustrine wetlands within the 500-foot buffer zone of the project. The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification is: 30.0, 254.1, 185.1, 5.5, 49.4 and 3.5 acres of freshwater marsh, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands and wet prairies, respectively.

Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP and SPSP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

### Comments on Effects to Resources:

An analysis of existing river crossings should be conducted to determine whether the widening of existing bridges would achieve the objectives sought by the City. FDOT studies have not previously supported the need for a third river crossing. The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands and uplands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve and state park must be presented to the Trustees for a determination of the parkway's compatibility with the conservation and preservation purposes for which the lands were acquired. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSLAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve and state park have been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection 40E-4.302(1) (a), F.A.C. Reasonable assurance has not been provided that the proposed activity will be "clearly in the public interest" upon weighing and balancing the factors stated in subsection 40E-4.302(1) (a), F.A.C. The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under. As proposed, the activity does not appear to meet the Conditions for Issuance or Additional Conditions for Issuance for an ERP under Part IV of Chapter 373, F.S., and Sections 40E-4.301 and 40E-4.302, F.A.C., because the applicant has not yet provided reasonable assurances that:

- (a) The proposed activity will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- (b) The proposed activity will not adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- (c) The proposed activity will not adversely affect the relative value of functions being performed by areas affected by the proposed regulated activity;
- (d) The proposed activity will not adversely affect the quality of receiving waters so that the special water quality standards for Outstanding Florida Waters will be met; and
- (e) The proposed activity located in, on, or over wetlands or other surface waters, will be clearly in the public interest.

### Additional Comments (optional):

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. The scope and magnitude of the proposed roadway improvements dictates that the applicant comply with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements by evaluating the anticipated environmental impacts at logical termini. It is therefore recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

To avoid crossing the NFSLAP and SPSP, the City needs to identify alternatives to the proposed bridge construction, including land use changes and modification of existing transportation system components. The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. If another east-west corridor to Hutchinson Island is justified, the team should also determine the location that minimizes impacts to environmental resources. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

Please contact Mr. Chris Stahl (phone - 850/245-2169) for further information and assistance.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5

(Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources because of their recreational (and other) values; Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

e. Federal Highway Administration

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

- Comprehensive Everglades Restoration Plan (CERP) Project: 11 acres in 100' buffer; 22 acres in 200' buffer.
- FFWCC Priority Wetlands Habitat with 7-9 focal species: 13 acres in 100' buffer; 23 acres in 200' buffer.
- National Wetlands Inventory: 8.2 estuarine acres and 2.5 palustrine acres in 100' buffer; 16.9 estuarine acres and 4.2 palustrine acres in 200' buffer.
- Savannas Preserve State park: 7 acres in 100' buffer; 13 acres in 200' buffer.
- North Fork St. Lucie Aquatic Preserve: 11 acres in 100' buffer; 22 acres in 200' buffer.

Comments on Effects to Resources:

Federal regulations require that highway project impacts to wetlands be avoided whenever possible. Avoidance must be strongly pursued before minimization or mitigation of impacts can be considered.

Where Comment is Addressed in Document: Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

xi. Wildlife and Habitat

a. Coordinator – FDOT District 4

Degree of Effect: 5 Dispute Resolution

Comments:

The Wildlife and Habitat issue for Alternative 5 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wildlife and Habitat issue for this project.

Commitments and Responses:

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

Where Comment is Addressed in Document: The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. U.S. Fish and Wildlife Service

Degree of Effect: 5 Dispute Resolution

Dispute Justification:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State

Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

**Service Comments, Federally Listed Species:**

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

**Wood Stork**

The project corridor is located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

For projects that impact 5 or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our Wood Stork Foraging Analysis Methodology (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can found in the Services November 9, 2007, Eastern Indigo Snake and Wood Stork Key (Service Federal Activity Code Number 41420-2007-FA-1494) provided to the U. S. Army Corps of Engineers (Corps) to guide their effect determinations for these two species (available upon request). The Methodology is also described in the Services August 28, 2007, Biological Opinion for the Terafina (G.L. Homes) development project (Service Federal Activity Code Number 41420-2007-FA-0653) located at <http://www.fws.gov/filedownloads/ftp%5Fverobeach/BIOLOGICAL%5FOPINIONS/TERAFINA/>.

**West Indian Manatee**

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic-Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800- DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than

50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.

7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/images/pdflibrary/St. Lucie County1.pdf](http://www.fws.gov/verobeach/images/pdflibrary/St_Lucie_County1.pdf)). Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Fish and Wildlife Resources:

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels northeast across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues east across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, Neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 5 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

Additional Comments (optional):

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 5 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

Where Comment is Addressed in Document: Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation)); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

c. **FL Fish and Wildlife Conservation Commission**

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

**Fish and Wildlife and Habitat Resources**

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannas Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map. Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and cumulative effects: Atlantic hawksbill (E), loggerhead turtle (T), green sea turtle (E), Kemps ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Shermans fox squirrel (SSC), Florida mouse (SSC),

Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

**Comments on Effects to Resources:**

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Pubic conservation lands of the Savannas Preserve State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

**Additional Comments (optional):**

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3). In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives.

While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.
2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals, amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.
4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.
5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.
6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

**Where Comment is Addressed in Document:** Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and

State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands Impacts) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation) the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

## B. Cultural

### i. Historical and Archaeological

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

**Commitments and Responses:**

Preparation of a Cultural Resource Assessment Survey will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

#### b. FL Department of State

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building  
500 South Bronough Street  
Tallahassee, FL 32399-0250  
(850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

#### c. Federal Highway Administration

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

- U.S.1 Resource Group within 100' buffer.
- One prehistoric habitation within 500' buffer (not evaluated by SHPO).
- Four field surveys have been done: two within portions of the 100' buffer; the remainder in 200-500' buffer.

**Comments on Effects to Resources:**

A CRAS should be done to determine whether there are other cultural/historical resources present within the project's area of effect and whether any of the cultural/historical resources present are eligible for the National Register of Historic Places.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSLAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the 9/23/03 DEP Memorandum (see pages 9-10). Additionally, FDOT should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across both the NFSLAP and SPSP.

**Additional Comments (optional):**

Under Article X, Section 18 of the Florida Constitution (as amended in 1998), dispositions of state-owned conservation lands are restricted to those lands "no longer needed for conservation purposes." If the proposed parkway/bridge construction activities necessitate right-of-way expansion, the FDOT will need to request that the Board of Trustees of the Internal Improvement Trust Fund determine whether the subject properties are no longer needed for conservation purposes.

This requirement must be met before the conveyance of these lands can proceed. In addition, please be advised that proposals to utilize state conservation lands may be required to meet the guidelines of the state's linear facility policy, POLICY Use of Natural Resource Lands by Linear Facilities as Approved by Board of Trustees of the Internal Improvement Trust Fund on January 23, 1996.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

c. Federal Highway Administration

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- Savannas Preserve State Park: 6.58 acres in 100' buffer; 12.94 acres in 200' buffer.
- Greenways Ecological Priority Linkages: 9.7 acres in 100' buffer; 23.21 acres in 200' buffer.
- Paddling Trails: 46.63 acres in 100' buffer; 94.7 acres in 200' buffer.
- Four parks: 7.2 acres in 100' buffer; 13.64 acres in 200' buffer.

**Comments on Effects to Resources:**

Public parks, recreation areas, wildlife and waterfowl refuges are 4(f) resources.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

iii. Section 4(f) Potential

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following protected 4(f) resources within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. The 100-foot project buffer also contains one cultural resource group; it is unknown at the time whether this cultural resource is eligible for listing in the National Register of Historic Places.

Due to the significance of the noted features, a Section 4(f) Determination of Applicability will be required. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Section 4(f) Potential issue for this alternative. The final design for this alignment will avoid or minimize impacts to these features to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

**Within 100' buffer:**

- One historical resource group (NRHP eligibility unknown). CRAS may identify other historical resources which may be NRHP eligible.
- Savannas Preserve State Park.
- Paddling Trails.
- Greenways Ecological Priority Linkages.
- City of Pt. St. Lucie forest, park, and recreation areas.
- Comprehensive Everglades Restoration Plan Project.

**Comments on Effects to Resources:**

Public parks, recreation areas, wildlife and waterfowl reserves, and significant public or private historical resources may be 4(f) resources.

A 4(f) Determination of Applicability should be done for this alternative.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

C. Community

i. Aesthetics

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; the project is likely to be considered compatible with community aesthetic values due to the future provision of medians, sidewalks, bicycle lanes, and landscaping. It

should be noted, however, that increased levels of noise, traffic, and vibrations (generated as a result of the project) may adversely affect the residential uses located in the project area.

The project also has the potential to alter the view shed of the St. Lucie River from the surrounding area. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Aesthetics issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The majority of existing land uses within the 500-foot project buffer are residential: west of the Saint Lucie River all single-family homes and east of the River one mobile home community. With such a significant amount of residential land in the project vicinity, corridor aesthetics will be a major concern to the surrounding community. There are no surgery centers or assisted living facilities in the 100-foot project buffer, which suggests that noise and vibration related impacts may not be of significant concern.

**Comments on Effects to Resources:**

The project is likely to be considered compatible with community aesthetic values due to the provision of medians, sidewalks, bicycle lanes, and landscaping. However, special consideration should be made regarding the compatibility of this project with the view shed of the Saint Lucie River from the surrounding area. Residential development in the vicinity of the project may be adversely affected by the increase in noise, traffic, and vibrations generated by the increase in vehicular traffic expected upon completion of the project. Special consideration should be made to minimize these adverse effects to the residential population located within the project impact area.

The project sponsor has held numerous community meetings and should continue to solicit input from community members and businesses in the vicinity on potential project effects related to corridor aesthetics as well as potential noise and vibration related impacts.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

c. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Single family residences occupy 60% of acreage within 200 ft. buffer.

**Comments on Effects to Resources:**

Alteration of view shed, increased noise.

**Where Comment is Addressed in Document:** Aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

ii. Economic

a. Coordinator – FDOT District 4

**Degree of Effect:** 2 Minimal

**Comments:**

According to agency comments, this project has the potential to impact the St. Lucie County tax base by removing properties (for project right-of-way purposes) from the tax roll. In addition, local businesses may be impacted during project construction due to the temporary re-routing of traffic and the disruption of traffic flow. It should be noted, however, that the number of businesses to be impacted would be small; also, improved accessibility will likely have a positive effect on the value of the remaining land leading to a possible increase in the tax base. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to residents and businesses during the project construction phase.

**Where Comment is Addressed in Document:** Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The predominant land use in the project area is low-density residential. According to the ETDM analysis, within the 100-foot project buffer, approximately 28 acres (59 percent of project buffer land area) is devoted to single-family homes. Also within the 100-foot buffer is 2+ acres of mobile home land use (five percent of project buffer land area).

Similar to the 100-foot project buffer, the 500-foot buffer consists of predominately single-family residential land uses. In addition, within the 500-foot buffer, there are twelve acres identified as other light industrial use and 3.5 acres identified as shopping center use. Also within the 500-foot buffer is a variety of low density community facilities such as small parks, an elementary school, and cultural centers not found within the 100-foot buffer.

**Comments on Effects to Resources:**

Due to the presence of developed residential and commercial land uses near the project, properties will need to be acquired for the roadway and related drainage uses. Alternative 5 would require the acquisition of 97 developed residential lots, 51 undeveloped residential lots, one commercial developed lot and one commercial undeveloped lot. Removing these properties from the tax rolls would impact the County's tax base. Improved accessibility would likely have a positive effect on the value of the remaining land, leading to a possible increase in the tax base.

In addition to acquisition impacts, the construction of the project could have a significant impact on local businesses due to temporary re-routing of traffic and disruption of traffic flow. These impacts could lead to lost business revenue. However, the number of businesses impacted would be relatively small. Special consideration should be given to mitigate any negative impacts of the projects construction phase.

**Where Comment is Addressed in Document:** Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

iii. Land Use

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. The project may also trigger development in undeveloped areas of the county. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

b. FL Department of Community Affairs

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal

High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The developable land within the immediate impact area (500-foot buffer) of this project is mostly built up with single-family residential west of the Saint Lucie River and a mobile home community and commercial uses east of the River. Significant acreage in natural habitat borders the Saint Lucie River on both sides.

**Comments on Effects to Resources:**

The proposed project is not expected to alter the current development pattern taking place in the vicinity of the project. However, since additional or more intensive development is generally associated with capacity improvements, the project could indirectly stimulate the development of undeveloped properties in the project vicinity.

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

iv. Mobility

a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

According to agency comments, this alignment will serve as a critical transportation route during emergency evacuation periods. The project will likely enhance evacuation capacity and traffic circulation on U.S. 1 and I-95 (two state designated hurricane evacuation routes) and improve access to the regional road network. The project is also anticipated to improve mobility in the area for automobiles and transit service as the additional capacity will alleviate traffic congestion on parallel corridors.

In addition, the project is anticipated to attract recreational users with the inclusion of enhanced landscaping, bicycle lanes, and a multi-use trail. Based on the foregoing, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Identified Resources and Level of Importance:**

The project area includes U.S. Highway 1, a north-south thoroughfare on the state highway system. Also included in the project area is Floresta Drive, a local north-south thoroughfare. The majority of streets in the project area serve local, residential needs. Within the one-mile buffer of the project site, there is an elementary school, various religious facilities, social services facilities, assisted living facilities, and health care facilities. There are no facilities of these types within the 500-foot buffer. A transit route for the Treasure Coast Connector bus runs along U.S. 1 from St. Lucie County into Martin County. A transit stop for this bus is located adjacent to the La Buona Vita mobile home community.

**Comments on Effects to Resources:**

The project will likely improve mobility for automobiles and transit service in the area. The additional capacity generated by the project should alleviate the traffic congestion experienced on parallel corridors (Prima Vista Boulevard and Port Saint Lucie Boulevard). By connecting U.S. Highway 1 with Interstate 95, the project would improve access to the regional road network. I-95 is part of the Strategic Intermodal System (SIS), and provides access to local businesses as well as to freight activity centers located in south and central Florida. Both Highway U.S. 1 and I-95 are hurricane evacuation routes, and the Crosstown Parkway Extension would enhance evacuation capacity and traffic circulation on these routes. Because the Crosstown Parkway Extension will include enhanced landscaping, bicycle lanes, and a multiuse trail, the Parkway itself will serve as an attraction to recreational users.

Special consideration should be given to the age of recreational users of the project and their transportation safety needs. To address any transit concerns, the project sponsor should work with the public transportation provider to provide for safe and efficient transit services and access to transit stops, with special emphasis on the transportation disadvantaged population.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

v. Relocation

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely impact 97 developed residential lots and one developed commercial lot. As a result, approximately 240 persons will be relocated. The project may also adversely impact services that support the community. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Relocation issue for this alternative. As more detailed project information on right-of-way needs becomes available, it is recommended that further assessment of relocation effects be conducted. In addition, the FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Community Cohesion is addressed in DEIS Section 5.1.1.1.2 (Community Cohesion); relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The predominant land use in the project area is low-density residential. According to the ETDM analysis, within the 100-foot project buffer, approximately 28 acres (59 percent of project buffer land area) is devoted to single-family homes. Also within the 100-foot buffer is 2+ acres of mobile home land use (five percent of project buffer land area).

Similar to the 100-foot buffer, the 500-foot project buffer consists of predominately single-family residential land uses. However, within the 500-foot buffer, there are twelve acres identified as other light industrial use and 3.5 acres identified as shopping center use. Also within the 500-foot buffer is a variety of low-density community facilities such as small parks, an elementary school, and cultural centers not found within the 100-foot buffer.

**Comments on Effects to Resources:**

Although Alternative 5 would have no direct impacts on community facility land uses, the alternative is expected to result in relocation impacts to 97 developed residential lots and one commercial developed lot. Using an estimated 2.5 persons per household, that would mean approximately 240 persons. Therefore, a significant impact would occur on community services resources that provide assistance to relocated individuals. As more detailed project information on right-of-way needs becomes available, it is recommended that further assessment of relocation effects be conducted.

**Where Comment is Addressed in Document:** Relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely have substantial impacts on social cohesion as it will bisect the community; the project will introduce a six-lane thoroughfare into a residential neighborhood. Residents and businesses of the area could adversely be affected by noise, vibrations, air quality issues, increased volumes of construction vehicles, and the rerouting of traffic during project construction. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Social issue for this alternative.

Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to residents and businesses during the project construction phase. The FDOT District 4 will also coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

c. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Low-density residential land uses are found within the 100-foot project buffer, including La Buona Vita, a 55+ mobile home community. According to the ETDM GIS analysis tool, based on the 2000 U.S. Census, there were 9,095 persons 65 years of age or older residing in the one-mile project buffer. This represents 48 percent of the project area population. The high percentage of elderly persons is due to the presence of La Buona Vita.

Within the area immediately surrounding the project (up to one mile away), ETDM analysis identified one Census block as having a minority population greater than 40 percent. The minority population includes black, Hispanic, Asian, Native American and other races. Countywide, the percentage minority population is approximately 33 percent.

**Comments on Effects to Resources:**

During construction, increased volumes of construction vehicles, noise, vibration, potential air quality issues, and rerouting of traffic would have an impact on the residential and business populations, and particularly the La Buona Vita senior community. Because the project involves the introduction of a six-lane thoroughfare into a single-family residential neighborhood, community bi-section will occur. Thus it appears the project would have a substantial impact on social cohesion within the community.

Emphasis should be placed on proactive public involvement to preserve as much as possible existing community ties and relationships. Additional study is recommended to assess both direct and indirect impacts to businesses and residents. Special consideration should be given to residents living in the immediate vicinity of the project in order to address community needs and concerns, especially those related to the transportation disadvantaged population.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); relocations are addressed in DEIS Section 5.1.1.5 (Relocation); relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

D. Secondary and Cumulative

i. Secondary and Cumulative Effects

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

b. FL Department of State

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

c. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. All six alternatives have the potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor between West Virginia Drive and I-95 and the Florida Turnpike, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor between I-95 and Hutchinson Island. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP, SPSP, Indian River Lagoon Aquatic Preserve, and surrounding communities is necessary.

The EIS should consider secondary and cumulative impacts that may result from additional development on Hutchinson Island if the proposed bridge is built. Items that should be evaluated include: stormwater runoff from increased impervious surfaces, impacts to listed species resulting from increased development and human activity on the island, and conflicts with the Coastal Barrier Resource Act. The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the proposed re-routing of I-95 and Turnpike traffic through the City.

The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other projects in the I-95-to-Hutchinson Island corridor comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

6. Alternative 6/1F

A. Natural

i. Air Quality

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

As stated in the Project Description, the project is consistent with Air Quality Conformity. St. Lucie County is not in an Air Quality Non-Attainment Area for any of the four pollutants - nitrogen oxides, ozone, carbon monoxide, and small particulate matter - specified by the USEPA National Ambient Air Quality Standards. Based on this information, a Summary DOE of None has been assigned to the Air Quality issue for this alternative.

**Where Comment is Addressed in Document:** Air quality is addressed in the technical report titled *Air Quality Report* and DEIS Section 4.3.3 (Air Quality) and DEIS Section 5.3.3 (Air Quality).

ii. Coastal and Marine

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to the Land Use 2000 GIS data layer in the EST, the 100-foot project buffer contains approximately 5.5 acres of coastal wetlands, 1.9 acres of natural river, and 621.8 linear feet of environmentally sensitive shoreline. This alternative is also located within the Indian River Coastal Assessment Framework and crosses the North Fork St. Lucie River Aquatic Preserve, which contains EFH. For these reasons and based on agency comments, a Summary DOE of Substantial has been assigned to the Coastal and Marine issue for this alternative.

**Commitments and Responses:**

An Essential Fish Habitat (EFH) Assessment will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve has also been determined to be a Section 4(f) Resource. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes

sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

#### **Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

#### **Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

##### **Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

##### **Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

##### **Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.).

In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation). Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

### iii. Contaminated Sites

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

According to the EST GIS analysis results, there are no geocoded dry cleaners, geocoded gas stations, geocoded petroleum tanks, hazardous waste sites, National Priority List sites, nuclear sites, solid waste facilities, Brownfield's, Superfund hazardous waste sites, or Toxic Release Inventory sites located within the 500-foot project buffer. Based on agency comments, however, a Summary DOE of Moderate has been assigned to the Contaminated Sites issue for this alternative.

**Commitments and Responses:**

Preparation of a Contamination Screening Evaluation Report will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

#### b. FL Department of Environmental Protection

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

There are several potential hazardous waste sites within the proposed corridor.

**Comments on Effects to Resources:**

- Based on a review of National Priority List (NPL) / Superfund Sites, Solid Waste / Dump Site, Brownfield, and Underground Storage Tank (UST) GIS data layers publicly available from the Florida Geographic Data Library, there are many potential contamination sites and hazardous materials sites present throughout the project area.
- Groundwater monitoring wells are likely present along and near the entire length of the project. Arrangements need to be made to properly abandon (in accordance with Chapter 62-532, Florida Administrative Code) and or replace any wells that may be destroyed or damaged during construction.
- There are numerous public supply wellfields in the project boundaries, with probably hundreds of water production wells (irrigation, potable, industrial). Best management practices need to be used during all construction activities.
- In the event contamination is detected during construction, the DEP and St. Lucie County Environmental Protection Department should be notified and the FDOT may need to address the problem through additional assessment and/or remediation activities. Dewatering projects would require permits / approval from the South Florida Water Management District, Water Use Section and coordination with the St. Lucie County Environmental Protection Department.
- Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C.
- Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005 to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>
- Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.
- Staging areas, with controlled access, should be planned in order to safely store raw material paints, adhesives, fuels, solvents, lubricating oils, etc. that will be used during construction. All containers need to be properly labeled. The project managers should

consider developing written construction Contingency Plans in the event of a natural disaster, spill, fire or environmental release of hazardous materials stored / handled for the project construction.

**Where Comment is Addressed in Document:** The potential for contamination is addressed in the technical report titled *Contamination Screening Evaluation Report* and DEIS Section 4.3.9 (Contamination) and DEIS Section 5.3.9 (Contamination).

iv. Farmlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that this alternative will not impact any prime farmlands. For this reason, a Summary DOE of None has been assigned to the Farmlands issue for this alternative.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

b. Natural Resources Conservation Service

**Degree of Effect:** 0 None

**Identified Resources and Level of Importance:**

No Prime or Unique Farmlands occur within any buffer width for Alternative 6.

**Comments on Effects to Resources:**

Therefore, no effect to Farmland Resources.

**Where Comment is Addressed in Document:** Farmlands are addressed in DEIS Section 4.3.16 (Farmlands) and DEIS Section 5.3.16 (Farmlands).

v. Floodplains

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results report the following FEMA FIRM floodzone acreages within the 100-foot project buffer: Zone AE (16.0 acres) - an area inundated by 100-year flooding for which base flood elevations have been determined; Zone X500 (0.9 acres) - an area inundated by 500-year flooding; and Zone X (30.9 acres) - an area determined to be outside the 100-year and 500-year floodplains.

This alternative includes a proposed bridge over much of the area designated within the 100-year floodplain. Due to potential issues regarding floodplain compensation, a Summary DOE of Substantial has been assigned to the Floodplains issue for this alternative.

**Commitments and Responses:**

A Floodplains Assessment, as per FDOT PD&E Guidance, will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains). Avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

vi. Infrastructure

a. Coordinator – FDOT District 4

**Degree of Effect:** 0 None

**Comments:**

The EST GIS analysis results reveal that no major impacts to infrastructure will result from this alternative. For this reason, a Summary DOE of None has been assigned to the Infrastructure issue for this alternative.

**Where Comment is Addressed in Document:** No response is necessary.

vii. Navigation

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

This alternative crosses the North Fork of the St. Lucie River which is considered a navigable waterway. As such, a Navigation Survey and USCG Bridge Permit will be required for this alternative. The USCG states that the clearance for this bridge should be similar to the clearance on the St. Lucie Boulevard bridge crossing. Based on the foregoing, a Summary DOE of Moderate has been assigned to the Navigation issue for this alternative.

### **Commitments and Responses:**

A USCG Bridge Questionnaire and Permit will be required for this project. Based on the proposed bridge design, a Navigation/Vessel Study may also be required and included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** Navigation is addressed in DEIS Section 5.3.18 (Navigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required)..

### **viii. Special Designations**

#### **a. Coordinator – FDOT District 4**

**Degree of Effect:** 5 Dispute Resolution

#### **Comments:**

The Special Designations issue for Alternative 6 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Special Designations issue for this project.

#### **Commitments and Responses:**

During the PD&E phase, the special provisions chapter of the PD&E Manual for special designations will be consulted.

**Where Comment is Addressed in Document:** The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

#### **b. U.S. Fish and Wildlife Service**

**Degree of Effect:** 5 Dispute Resolution

#### **Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration.

#### **Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

#### **Comments on Effects to Resources:**

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels east across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues to the northeast across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR.

These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida In 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state.

The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

#### **Additional Comments (optional):**

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 6 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and

Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); A tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

ix. Water Quality and Quantity

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on the EST GIS analysis results, the North Fork St. Lucie River Aquatic Preserve (NFSLRAP) - a designated Outstanding Florida Water and Class III Water Body - is located within the 100-foot project buffer. Although the project will be constructed to meet state water quality and quantity standards in accordance with the South Florida Water Management's District Basis for Review, a Summary DOE of Substantial has been assigned to the Water Quality and Quantity issue for this alternative due to the fact that potential adverse impacts to water quality may occur during project construction.

**Commitments and Responses:**

A Water Quality Impact Evaluation will be included in the scoping recommendations for this project.

**Where Comment is Addressed in Document:** The location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); Water Quality Impact Evaluation checklists are contained in DEIS Appendix F (Water Quality Impact Evaluation Checklist).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) is designated Class III waters under Rule 62-302.400 (12)(b), Florida Administrative Code (F.A.C.), and Outstanding Florida Waters (OFW) under Rule 62-302.700 (9), F.A.C. The effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to the river's water quality as well as the surrounding environmentally sensitive areas, including Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed parkway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed. Every effort should be made to maximize the treatment of stormwater runoff from the proposed parkway/bridge construction project, as area stormwater ultimately discharges to the NFSLAP and SPSP, designated OFWs and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C.

The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to Rule 40E-4, F.A.C., and the SFWMD Basis of Review for ERP Applications.

**Additional Comments (optional):**

The EIS should focus on impacts to identified natural resources, water quality degradation, stormwater management and treatment, and compatibility with state and federal resource management plans. Project alternatives should include measures to avoid and minimize all impacts.

**Where Comment is Addressed in Document:** Water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality).

x. Wetlands

a. Coordinator – FDOT District 4

**Degree of Effect:** 5 Dispute Resolution

**Comments:**

The Wetlands issue for Alternative 6 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wetlands issue for this project.

**Commitments and Responses:**

Preparation of a Wetlands Evaluation Report will be included in the scoping recommendations for this project. A Uniform Wetland Assessment Method will additionally be included.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

b. National Marine Fisheries Service

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Comments were previously provided for this project through the EST on September 29, 2006. Based on the project location, information provided in the ETDM website, GIS effects analysis on wetlands, interagency meetings, and site visits, NOAA's National Marine Fisheries Service (NMFS) has determined that the proposed roadway would cross the North Fork St. Lucie River (NFSLR) and impact mangrove wetlands, mud and sand bottom, and palustrine wetlands. The palustrine wetlands are composed of pine with a mixture of hardwood and herbaceous species. The mangrove community is comprised of primarily red mangrove (*Rhizophora mangle*). Mud, sand bottom, and mangrove habitats have been designated by the South Atlantic Fishery Management Council (SAFMC) as essential fish habitat (EFH). Federally managed fishery species associated with the mud and sand bottom include red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), and pink shrimp (*Farfantepenaeus duorarum*). Federally managed species associated with mangroves include gray, lane (*Lutjanus synagris*), mutton (*Lutjanus analis*), and schoolmaster snappers (*Lutjanus apodus*); goliath grouper (*Epinephelus itajara*), spiny lobster (*Panulirus argus*) and white grunt (*Haemulon plumieri*). Detailed information on the EFH requirements of the snapper/grouper complex and other federally managed fishery species, are provided in the 1998 amendment to the Fishery Management Plans for the South Atlantic region, which are prepared by the SAFMC.

The project is located in a sensitive and protected area; therefore we consider the location to be of critical importance. The impacts to EFH would occur to the Savannahs Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. The wetlands associated with the NFSLR are extremely high quality and fully meet the requirements of the aforementioned species. The Florida Fish and Wildlife Research Institute (FWRI) has an active stocking program for red drum in the NFSLR. This further demonstrates the importance of this estuary to this federally managed fishery. The majority of the mangrove habitat in south Florida lies in either national or state preserves (Gilmore and Snedaker 1993). The intent of designating an area as an aquatic preserve is that it be kept in essentially natural condition so that its biological, aesthetic and scientific values may endure for the enjoyment of future generations as stated in Section 258.36, Florida Statutes.

Riverine mangrove forests in Florida, as well as elsewhere in the world where there is abundant fresh water, represent the most productive forest type (Pool et al. 1977). Mangrove wetlands and estuarine aquatic beds directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. Further, mangroves are part of a habitat complex that includes sand and mud bottom and seagrass beds. This complex supports a diverse community of fish and invertebrates within the estuary. Mangroves provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish, such as blue crab, striped mullet, and tarpon. Mangrove wetlands also provide important water quality maintenance functions, such as pollution uptake (bio-assimilation). Mangroves stabilize shorelines, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats has and continues to reduce overall fisheries production within Florida waters. Additionally, mangrove habitat is one of the world's most threatened tropical ecosystems with global loss exceeding 35 percent, and the current rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs (Mumby et al. 2004).

**Comments on Effects to Resources:**

Because the proposed bridge would cross the NFSLR, construction related activities will directly and indirectly adversely affect EFH and federally managed fishery species. Mangrove habitat in particular would be impacted. Mangrove habitat is designated by the SAFMC as a habitat area of particular concern (HAPC). HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. The new roadway will require water quality treatment likely including storm water retention ponds. These facilities could impact additional wetlands and EFH. Impacts associated with this project would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishery resources. Construction of a bridge across the NFSLR would further fragment this critical estuary.

With the construction of additional impervious surfaces associated with the proposed bridge, an increased discharge of storm water may occur into surrounding wetlands. Hydrocarbons and other contaminants may enter into and degrade water quality adversely impacting habitat utilized by federally managed species.

**Additional Comments (optional):**

NMFS does not believe that measures to avoid and minimize impacts to EFH have been exhausted. Please consider the following as the project progresses:

**Avoidance:**

- 1) Best engineering technologies should be considered and implemented to avoid impacts to EFH. Please consider the construction of a tunnel as an alternative to a bridge. This would eliminate impacts to EFH and other wetlands, reduce impacts to the Aquatic Preserve and State Park, and still accomplish the intended project purpose. A tunnel could be used along any of the proposed corridors.
- 2) The use of bridges north and south of the proposed corridor should be considered. Is it possible to expand these bridges to accommodate more traffic?
- 3) If storm water ponds are necessary, they should be located in disturbed upland areas. The location and type of storm water management systems associated with this project should be coordinated with NMFS.
- 4) If a pile supported bridge is eventually constructed, the pilings should be located in uplands and if possible the bridge should span the entire natural area and River.

**Minimization:**

- 1) Conservation and protective measures (i.e., best management practices for water quality and erosion control) should be included in the project design and description, and implemented during construction activities.
- 2) A Storm Water Management Plan should be developed and implemented to ensure that the additional surface and storm water runoff from the new impervious surface will be properly treated and disposed of in accordance with state and federal (NPDES) standards.
- 3) If a bridge is constructed it should be of sufficient height to minimize shading impacts. Mitigation will be required for shading impacts.

**Mitigation:**

- 1) A plan for compensatory mitigation that fully compensates for unavoidable impacts to wetland communities that would be degraded or permanently eliminated by the proposed project should be developed. The plan should include the following:
  - a. Sufficient detail to demonstrate that no net loss of wetland functions and values would result from project authorization.
  - b. A detailed overview and cross-sectional drawings of the mitigation area(s), to include elevations of vegetative planting sites to be used for mitigation purposes.
  - c. A detailed description of the proposed mitigation plan, including success criteria.
  - d. Plans for the long-term protection and maintenance of the mitigation area(s).
  - e. A functional assessment such as UMAM should be performed for the impact areas as well as the mitigation area.

Since federally listed species may be present in the project area and the proposed work may impact these species, a biological assessment/evaluation (BA/BE) for federally-listed species may be needed. The BA/BE should include a complete detailed project description, which includes the purpose, detailed construction activities, resource conservation and protection measures, and information on listed species (i.e., biological surveys, maps, project designs, scientific journals/reference, etc.). In addition, an effects analysis should be included in the BA/BE. That analysis should describe direct and indirect effects of the proposed project and present the final effects determination of the project with regard to listed species (i.e., no effect, may affect; but not likely to adversely affect; or may adversely affect). To assist you, we suggest contacting your NMFS ETAT member to obtain the BA/BE list of construction measure guidelines and provisions to minimize impacts to ESA-listed species, and an ESA initiation package template.

NMFS would prefer Alternative 4, but only after other engineering technologies (i.e. tunnel) have been fully explored. These comments are provided in accordance with the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

**Where Comment is Addressed in Document:** Wetlands (including mangrove habitats) are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); construction impacts are addressed in DEIS Section 5.3.19 (Construction); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

c. U.S. Fish and Wildlife Service

**Degree of Effect:** 5 Dispute Resolution

**Dispute Justification:**

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration.

**Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Comments on Effects to Resources:**

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels east across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues to the northeast across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park).

The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration.

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

**Where Comment is Addressed in Document:** Wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy).

d. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The area for the six proposed alternatives encompasses several major creek systems, together with associated floodplains and wetland areas, and is hydrologically connected to the North Fork of the St. Lucie River - part of the North Fork St. Lucie Aquatic Preserve (NFSLAP) and Savannahs Preserve State Park (SPSP), both designated Outstanding Florida Waters.

The EST indicates that there are 49.1 acres of estuarine and 11.0 acres of palustrine wetlands within the 500-foot buffer zone of the project. The Wetlands 2000 GIS report indicates that within the 5280-foot buffer, the wetland land use classification is: 29.5, 247.8, 211.0, 5.5, 49.3 and 3.5 acres of freshwater marsh, mixed shrubs, mixed wetland hardwoods, saltwater marshes, wet hydric pinelands and wet prairies, respectively.

Significant state and federal commitments to protect the Indian River estuarine system, together with the potential for adverse impacts to federal and state resources resulting from construction of a new bridge across the NFSLAP and SPSP, warrant preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The EIS should document the purpose and need for the project, address the issues discussed in the state's ETDM comments and previous state clearance letters, and give serious consideration to a "no-build" alternative.

### **Comments on Effects to Resources:**

An analysis of existing river crossings should be conducted to determine whether the widening of existing bridges would achieve the objectives sought by the City. FDOT studies have not previously supported the need for a third river crossing. The environmental resource permit applicant will be required to eliminate or reduce the proposed wetland resource impacts of parkway/bridge construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Any alternative located within the shaded area depicted in the applicant's location map will affect sovereignty submerged lands and state-owned wetlands and uplands; therefore, the project will require final authorization for use of those lands from the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The City's request for an easement to cross the aquatic preserve and state park must be presented to the Trustees for a determination of the parkway's compatibility with the conservation and preservation purposes for which the lands were acquired. The City must also demonstrate that development of the corridor is "in the public interest" as that term is defined in Chapter 258, Florida Statutes (F.S.), and Chapter 18-20, Florida Administrative Code (F.A.C.).

The NFSLAP was established as an aquatic preserve under Part II of Chapter 258, F.S. As stated in Section 258.36, F.S., it was the Legislature's intent that aquatic preserves be kept in essentially natural condition so their biological, aesthetic and scientific values may endure for the enjoyment of future generations. The aquatic preserve and state park have been designated as Class III and Outstanding Florida Waters, designations that afford special protection because of their high-quality recreational and ecologically significant waters. Water quality in Outstanding Florida Waters may not be degraded, and any proposed activity must be found to be "clearly in the public interest" under Section 373.414(1), F.S., and subsection 40E-4.302(1) (a), F.A.C. Reasonable assurance has not been provided that the proposed activity will be "clearly in the public interest" upon weighing and balancing the factors stated in subsection 40E-4.302(1) (a), F.A.C. The applicant must also provide reasonable assurance that the construction and operation of the proposed facility - considering direct, secondary and cumulative impacts - will comply with the environmental resource permit (ERP) provisions of Part IV, Chapter 373, F.S., and the rules adopted there under. As proposed, the activity does not appear to meet the Conditions for Issuance or Additional Conditions for Issuance for an ERP under Part IV of Chapter 373, F.S., and Sections 40E-4.301 and 40E-4.302, F.A.C., because the applicant has not yet provided reasonable assurances that:

- (a) The proposed activity will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- (b) The proposed activity will not adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- (c) The proposed activity will not adversely affect the relative value of functions being performed by areas affected by the proposed regulated activity;
- (d) The proposed activity will not adversely affect the quality of receiving waters so that the special water quality standards for Outstanding Florida Waters will be met; and
- (e) The proposed activity located in, on, or over wetlands or other surface waters, will be clearly in the public interest.

### **Additional Comments (optional):**

On September 26, 2003, the Florida State Clearinghouse determined that, at this stage, the proposed federal action (allocation of federal funds for the referenced project) was consistent with the Florida Coastal Management Program (SAI # FL200307143088C) and provided FDOT with DEP's detailed comments on the project in an attachment. Please refer to and address all comments and suggestions that were covered in that memorandum. The scope and magnitude of the proposed roadway improvements dictates that the applicant comply with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements by evaluating the anticipated environmental impacts at logical termini. It is therefore recommended that the applicant engage all state, local and federal agencies whose jurisdictions will be affected in further discussions before proceeding to the PD&E stage.

To avoid crossing the NFSLAP and SPSP, the City needs to identify alternatives to the proposed bridge construction, including land use changes and modification of existing transportation system components. The Department recommends that any further planning and evaluation of the project be coordinated with and evaluated by a state-federal-local interagency team, in consultation with the local Metropolitan Planning Organization. If another east-west corridor to Hutchinson Island is justified, the team should also determine the location that minimizes impacts to environmental resources. State participants should include the Florida Departments of Transportation, Community Affairs and Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the South Florida Water Management District, which is responsible for environmental resource permitting and review of proprietary issues over sovereignty submerged lands.

Please contact Mr. Chris Stahl (phone - 850/245-2169) for further information and assistance.

**Where Comment is Addressed in Document:** Purpose and need for the project is contained in DEIS Section 2.0 (Purpose of and Need for Action); wetlands are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5

(Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); the North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have also been determined to be Section 4(f) Resources because of their recreational (and other) values; Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); the location of the project within Outstanding Florida Waters is addressed in DEIS Section 4.3.8 (Outstanding Florida Waters) and DEIS Section 5.3.8 (Outstanding Florida Waters); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 (Coastal Zone Consistency); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); construction impacts are addressed in DEIS Section 5.3.19 (Construction); land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

e. Federal Highway Administration

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

- Comprehensive Everglades Restoration Plan (CERP) Project: 14 acres in 100' buffer; 28 acres in 200' buffer.
- FFWCC Priority Wetlands Habitat with 7-9 focal species: 14 acres in 100' buffer; 27 acres in 200' buffer.
- National Wetlands Inventory: 9.7 estuarine acres and 2.3 palustrine acres in 100' buffer; 19.5 estuarine acres and 3.9 palustrine acres in 200' buffer.
- Savannas Preserve State park: 10 acres in 100' buffer; 20 acres in 200' buffer.

Comments on Effects to Resources:

Federal regulations require that highway project impacts to wetlands be avoided whenever possible. Avoidance must be strongly pursued before minimization or mitigation of impacts can be considered.

Where Comment is Addressed in Document: Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation)

xi. Wildlife and Habitat

a. Coordinator – FDOT District 4

Degree of Effect: 5 Dispute Resolution

Comments:

The Wildlife and Habitat issue for Alternative 6 is currently in Dispute Resolution. For this reason, a Summary DOE of Dispute Resolution has been assigned to the Wildlife and Habitat issue for this project.

Commitments and Responses:

Preparation of an Endangered Species Biological Assessment will be included in the scoping recommendations for this project. During the bridge construction, the FDOT will adhere to the USFWS's Standard Manatee Protection Construction Conditions for Aquatic-Related Activities.

Where Comment is Addressed in Document: The Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee.

b. U.S. Fish and Wildlife Service

Degree of Effect: 5 Dispute Resolution

Dispute Justification:

The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish. These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer

Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration.

#### **Recommended Actions for Dispute:**

We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

#### **Comments on Effects to Resources:**

##### **Service Comments, Federally Listed Species:**

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

##### **Wood Stork**

The project corridor is located in the Core Foraging Areas (within 18.6 miles) of two active nesting colonies of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a Service Approved mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

For projects that impact 5 or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our Wood Stork Foraging Analysis Methodology (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can be found in the Services November 9, 2007, Eastern Indigo Snake and Wood Stork Key (Service Federal Activity Code Number 41420-2007-FA-1494) provided to the U. S. Army Corps of Engineers (Corps) to guide their effect determinations for these two species (available upon request). The Methodology is also described in the Services August 28, 2007, Biological Opinion for the Terafina (G.L. Homes) development project (Service Federal Activity Code Number 41420-2007-FA-0653) located at <http://www.fws.gov/filedownloads/ftp%5Fverobeach/BIOLOGICAL%5FOPINIONS/TERAFINA/>.

##### **West Indian Manatee**

The project occurs within occupied habitat of the endangered West Indian manatee (*Trichechus manatus*). To protect manatees during construction of the project, we recommend that the Florida Department of Transportation (FDOT) follow the Services Standard Manatee Protection Construction Conditions For Aquatic- Related Activities (see below).

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews. A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800-DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.

7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1- 800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904) 922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

The Service believes that the following federally listed species have the potential to occur in or near the project site: wood stork, West Indian manatee and eastern indigo snake (*Drymarchon corais couperi*), as well as the federally protected plants listed at the link for St. Lucie County at our web site ([http://www.fws.gov/verobeach/images/pdf/library/St. Lucie County1.pdf](http://www.fws.gov/verobeach/images/pdf/library/St_Lucie_County1.pdf)). Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Service Comments, Fish and Wildlife Resources, Wetlands, and Special Designations:

Corridor Alternative 5 begins at the intersection of the Crosstown Parkway and Manth Lane, extends northeast along West Virginia Drive to its intersection with Floresta Drive, travels east across the neighborhood west of the north fork of the St. Lucie River (NFSLR), it continues to the northeast across the NFSLR to a point south of La Buona Vita Village development and north of Liberty Medical complex to a terminus with U.S. Highway 1. The length of the proposed bridge required to span the NFSLR was not indicated in the information provided. The project would impact valuable forested and emergent wetlands that occur in the flood plain of the NFSLR. These wetlands provide important habitat for a variety of fish and wildlife species including American alligators, West Indian manatees, river otters, wood storks, little blue herons, brown pelicans, neotropical migrant birds, snook, and the opossum pipefish.

These wetlands are protected conservation lands located in the State of Florida's North Fork of the St. Lucie River Buffer Preserve (Buffer Preserve) (part of the Savannahs Preserve State Park). The 5,000 acre Buffer Preserve is located along a 10 mile stretch of the NFSLR, and was established by the State of Florida in 1972 to protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state. The Buffer Preserve also represents one of the last areas of natural habitat remaining in a highly urbanized area. We do not believe that it is appropriate to construct a new bridge through a protected conservation area. Accordingly, we cannot support the use of Corridor Alternative 6 for the project and urge that it be eliminated from further consideration. We note that Corridor Alternative 4 does not affect lands protected for conservation purposes and therefore recommend that Corridor Alternative 4 be adopted for the project.

Additional Comments (optional):

According to the Section 404(b) (1) guidelines of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is required to permit only the least damaging practicable alternative for a project. Accordingly, the Corps has recently indicated to the Service that they believe a practicable alternative may exist for Alternative 6 that would avoid impacts to the Buffer Preserve. The Corps notes that the construction of a tunnel underpass beneath the Buffer Preserve would achieve the projects goals without adverse impacts to conservation lands. Specifically, the construction of a tunnel underpass would not require land clearing, or the dredging and filling of wetlands within the Buffer Preserve.

The Service supports the concept of constructing a tunnel underpass to avoid impacts to natural resources within public conservation lands. We recommend that the project sponsor investigate the use of a tunnel, in lieu of the proposed bridge, to accomplish the goals of the project.

Where Comment is Addressed in Document: Wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); the North Fork St. Lucie River Aquatic Preserve and Savannahs Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); Essential Fish Habitat is addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the Dispute Resolution is addressed in DEIS Section 1.5 (Areas of Controversy); a tunnel concept report is contained in DEIS Appendix G (*Tunnel Concept Report*); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action).

c. FL Fish and Wildlife Conservation Commission

Degree of Effect: 4 Substantial

Identified Resources and Level of Importance:

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated a second agency review of ETDM #8247 in St. Lucie County and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

### Fish and Wildlife and Habitat Resources

A wildlife and habitat resource analysis was conducted using GIS data within a 500-foot buffer along each side of the six Corridor Alternatives. Our findings show that overall, upland and wetlands vegetation types within all six Corridor Alternatives are very similar (see Table 1). Wetlands plant community types include cypress/pine/cabbage palm, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forest, open water, shrub swamp, and mangrove swamp. Upland habitats include pinelands, upland hardwood hammock, and dry prairie. All six Corridor Alternatives cross the Savannas Preserve State Park and the North Fork of the St. Lucie River Aquatic Preserve. All six alignments also cross areas designated by FWC as Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, and one or more of FWCs Strategic Habitat Conservation Areas designated for the Florida scrub jay, scrub communities, and wading birds. Our analysis shows that all Corridor Alternatives bisect wetlands and upland plant communities which have been assigned a score of from six to eight, ranking them as of moderate to high quality (1 = Low 10 = High) on FWCs Integrated Wildlife Habitat Ranking System map. Information for a comparative measure of habitat quality and level of environmental sensitivity is provided in Table 2 for lands along and immediately adjacent to the ROW of all six Corridor Alternatives, as measured by the above-mentioned FWC GIS wildlife and habitat resource database layers. These habitat quality indicators include FWCs Biodiversity Hotspots, Priority Wetlands for wetlands dependent listed species, public lands, Aquatic Preserves, Strategic Habitat Conservation Areas, and the results of the Integrated Wildlife Habitat Ranking System map.

Based on known range and habitat preference, the following species listed by FWC as Endangered (E), Threatened (T), or Species of Special Concern (SSC) potentially occur in the project area or occur in offsite areas which may be adversely affected by secondary and cumulative effects: Atlantic hawksbill (E), loggerhead turtle (T), green sea turtle (E), Kemps ridley (E), gopher tortoise (T), eastern indigo snake (T), Atlantic saltmarsh snake (T), Florida pine snake (SSC), Shermans fox squirrel (SSC), Florida mouse (SSC), Southeast beach mouse (T), West Indian manatee (E), brown pelican (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), roseate spoonbill (SSC), wood stork (E), snail kite (E), crested caracara (T), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida sandhill crane (T), piping plover (T), American oystercatcher (SSC), least tern (T), Florida burrowing owl (SSC), Florida scrub jay (T), Atlantic sturgeon (SSC), and mangrove rivulus (SSC).

### Comments on Effects to Resources:

Direct effects from all six Corridor Alternatives could be substantial, resulting in the loss of quality upland and wetlands habitat, including forested floodplain and mangrove swamp, from ROW expansion and construction of Drainage Retention Areas (DRA). In addition, construction of the new bridge over the North Fork of the St. Lucie River could also have adverse effects on the floodplain and aquatic areas, as well as many listed species, possibly including juvenile sea turtles and the manatee. Public conservation lands of the Savannas Preserve State Park, lands managed by the South Florida Water Management District, and the St. Lucie River Aquatic Preserve could also be adversely affected.

Secondary and cumulative effects could be substantial for all six alignments, and could include the loss or degradation of wetlands and upland habitat from residential and commercial development due to improved access provided by the new road and bridge. Effects from increased noise and lights could also degrade and adversely affect public lands in the area by reducing the quality of the recreational experience. Water quality could also be reduced in the St. Lucie River Aquatic Preserve by increased siltation and from the discharge of oils, greases, and other pollutants due to runoff from the proposed new road, new bridge, and future residential and commercial development. Due to the sizable total length of the bridge, scuppers would probably be used to remove stormwater from the roadway, which would be discharged directly into the St. Lucie River and Aquatic Preserve.

To address this effect, a well-designed water quality improvement plan for compensatory mitigation will be needed in the immediate drainage basin. Shading from the bridge structure could also reduce productivity within the aquatic area and floodplain. Increased roadkills can be expected for many species on the new roadway, including some bird, amphibian, and reptile species listed by FWC.

### Additional Comments (optional):

Due to the presence of a significant quantity and quality of upland and wetlands habitat, including the floodplain of the North Fork of the St. Lucie River and the Aquatic Preserve, which will be crossed by all six Alternatives, there is no clear preferred Corridor Alternative from a wildlife resource standpoint based on our evaluation.

However, our analysis shows that Corridor Alternative 4 appears to cross the least amount of floodplain associated with the North Fork of the St. Lucie River; has the second lowest acreage of wetlands, and lowest public conservation land involvement within 500 feet of the corridor of all six alignments; will not affect mangrove swamp wetlands as do Alternatives 1, 2, 3 and 6; and ranks second in terms of previous disturbance, because it has the second highest acreage of high and low impact urban land uses along the alignment compared to all other corridors. Corridor Alternative 4 also ranks first in terms of the lowest potential effects to the six Habitat Quality Indicators analyzed within 500 feet of all Alternatives (see Table 3). In addition, Corridor Alternative 4 has the lowest acreage of native upland habitat within the corridor compared to the other Alternatives.

While we recognize that this project represents a longstanding, locally identified transportation need, protection of public conservation land and the wildlife resources they support is paramount in our view. We respectfully request that FDOT fully and adequately search for ways to resolve this transportation need with reduced effects to important and irreplaceable natural systems during the upcoming Project Development and Environment (PD&E) Study. We also recommend the following measures be included in the PD&E Study for determining methods to avoid, minimize, and mitigate project effects to listed species and important habitat systems:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of

Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area, functionally equivalent, equal to or of higher functional value, and as or more productive as the habitat affected by the project. Upland mitigation sites should also adhere to the same test of quality, productivity, and functionality.

2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for DRAs during the PD&E Study. The methodology for these surveys should be coordinated with FWC and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.
3. The PD&E study should include an in-depth assessment of project effects on listed and rare wildlife species. These studies should address the effects from the loss, fragmentation and isolation of habitat; potential for reduced dispersal; and long-term effects of expanded roadkills since the expanded ROW could result in a population sink due to mortality from increased roadkills. Mammals, amphibians, and reptiles should be considered in the study design. The goal of the mitigation plan should be a landscape-level effort which focuses on providing long-term protection of the quality and functionality of the interconnected habitat systems of the North Fork of the St. Lucie River, the Aquatic Preserve, and surrounding public lands.
4. Based on the survey results, a plan should be developed to address direct, secondary, and cumulative effects of the project on fish, wildlife, and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public conservation lands such as the Savannas Preserve State Park, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by FWC.
5. The PD&E Study should also include an investigation of the design, cost, and construction techniques for complete bridging of the North Fork of the St. Lucie River and floodplain wetlands in addition to the outer upland transition area of the floodplain. This would result in maintaining natural and appropriate hydrological and floodplain functioning, and minimize wetlands fill to conserve habitat. This type of bridge design would also provide for habitat connectivity and reduce potential roadkills for characteristic wildlife species such as whitetail deer, bobcat, river otter, and other upland, transitional, and aquatic species that now use the wetlands and riparian systems within the project area. The bridge should also be designed and constructed at a height which permits sunlight under the structure to support the growth of floodplain and aquatic vegetation to maintain productivity. In addition, properly designed fencing along the roadway which considers proper mesh size can also serve to exclude animals from the roadway and reduce roadkills for many wildlife species.
6. The EIS should address protection measures for manatees and juvenile sea turtles that may be required by our agency for a new bridge over the North Fork of the St. Lucie River. Since no information was provided in terms of seasonality of bridge construction, the length or duration of project work, or the type of dredging to be utilized, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures which may be required by FWC could include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is to be considered as a method of demolition, please be aware that in the area of the project, it could be important to perform the blasting during specific times of the year, if possible. In addition, an extensive blast plan and marine species watch plan will need to be developed and submitted to FWC for approval as early in the process as possible. Further coordination with our agency will be necessary in order to determine site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan and Robbin Trindell in our Imperiled Species Management Section in Tallahassee at (850) 922-4330 during the early phase of preparation of the EIS during the PD&E Study.
7. Habitat effects in both uplands and wetlands should be avoided where possible by interchangeably designing the road expansion, or new segments, along and through those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.
8. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies to reduce habitat loss and protect streams, lakes, and wetlands. Staging areas, along with borrow areas for fill, should also be surveyed for listed species.

**Where Comment is Addressed in Document:** Vegetation maps are shown in DEIS Figures 4.7 and 4.8; wetlands, including mangroves, are addressed in the technical report titled *Wetlands Evaluation Report* and DEIS Section 4.3.5 (Wetlands) and DEIS Section 5.3.5 (Wetlands); wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species, including the West Indian manatee, wood stork, eastern indigo snake, and bald eagle; indirect (secondary) impacts are addressed in DEIS Section 5.3.5 (Wetlands Impacts) and DEIS Section 5.3.14.2 (Indirect Impacts); the North Fork St. Lucie River Aquatic Preserve is addressed in DEIS Section 4.3.6 (Aquatic Preserves); water quality is addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); floodplains are addressed in the technical report titled *Location Hydraulic Report* and DEIS Section 4.3.11 (Floodplains) and DEIS Section 5.3.11 (Floodplains); avoidance and minimization measures to floodplain effects are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory

Mitigation). The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park (Buffer Preserve) have also been determined to be Section 4(f) Resources; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation); fisheries resources are addressed in the technical report titled *Essential Fish Habitat* and in DEIS Section 4.3.15 (Essential Fish Habitat) and DEIS Section 5.3.15 (Essential Fish Habitat); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); the detailed alternatives analysis is contained in DEIS Section 3.0 (Alternatives Including Proposed Action); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); construction impacts are addressed in DEIS Section 5.3.19 (Construction).

**B. Cultural**

**i. Historical and Archaeological**

**a. Coordinator – FDOT District 4**

**Degree of Effect:** 3 Moderate

**Comments:**

According to agency comments, there is a high probability for unrecorded archaeological sites to exist in the vicinity of the project. Due to the presence of an archaeological site that has not been evaluated by SHPO (and the potential presence of other sites), a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue for this alternative.

During the Project Development phase, the FDOT will conduct a Cultural Resource Assessment Survey to (1) further identify the presence of other applicable resources within the vicinity of the project and (2) focus on the avoidance and minimization of potential project impacts to any cited resources.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

**b. Federal Highway Administration**

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

- U.S.1 Resource Group within 100' buffer.
- One prehistoric habitation within 500' buffer (not evaluated by SHPO).
- Four field surveys have been done: two within portions of the 100' buffer; the remainder in 200-500' buffer.

**Comments on Effects to Resources:**

A CRAS should be done to determine whether there are other cultural/historical resources present within the project's area of effect and whether any of the cultural/historical resources present are eligible for the National Register of Historic Places.

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

**c. FL Department of State**

**Degree of Effect:** 3 Moderate

**Confidential:**

Review comments cannot be displayed on Public Access website

**Confidential:**

Archaeological or Historic Sites may occur in the area, please contact the Bureau of Archaeological Research for more information at:

R.A. Gray Building  
500 South Bronough Street  
Tallahassee, FL 32399-0250  
(850) 246-6440

**Where Comment is Addressed in Document:** Archaeological and historic resources are addressed in the technical report titled *Cultural Resource Assessment Survey* and DEIS Section 4.2 (Cultural and Historic Resources) and DEIS Section 5.2 (Cultural and Historic Resources).

ii. Recreation Areas

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following recreational features within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. As indicated by the Florida Natural Areas Inventory, the noted public conservation lands contain significant natural communities and numerous element occurrences of listed species. These lands are also important in terms of natural function such as flood control, filtering storm water runoff, aquifer recharge, etc.

Based on agency comments and the significance of the noted recreational features, a Summary DOE of Substantial has been assigned to the Recreation Areas issue for this alternative. The final design for this alignment will avoid or minimize impacts to these lands, including any proposed acquisition sites in the project area, to the greatest extent practicable; appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve and Savannas Preserve State Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

b. Federal Highway Administration

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

- Savannas Preserve State Park: 10.01 acres in 100' buffer; 19.8 acres in 200' buffer.
- Greenways Ecological Priority Linkages: 9.82 acres in 100' buffer; 24.21 acres in 200' buffer.
- Paddling Trails: 47.81 acres in 100' buffer; 97.05 acres in 200' buffer.
- Three parks: 10.44 acres in 100' buffer; 20.43 acres in 200' buffer.

**Comments on Effects to Resources:**

Public parks, recreation areas, wildlife and waterfowl refuges are 4(f) resources.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources because of their recreational (and other) values; a Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

c. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The following public conservation lands are located in the vicinity of this project: North Fork St. Lucie Aquatic Preserve (NFSLAP), North Fork St. Lucie River Canoe Trail, and Savannas Preserve State Park (SPSP).

**Comments on Effects to Resources:**

These lands contain significant natural communities and numerous element occurrences of listed species, as indicated by the Florida Natural Areas Inventory. The Department is interested in preserving the area's natural communities, wildlife corridor functions, natural flood control, stormwater runoff filtering capabilities, aquifer recharge potential, and recreational trail opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of the proposed parkway on the above public lands and any proposed acquisition sites. FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements.

The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the 9/23/03 DEP Memorandum (see pages 9-10). Additionally, FDOT should provide to the Department's Division of State Lands the information necessary for consideration of a public easement and permit authorization to across both the NFSLAP and SPSP.

**Additional Comments (optional):**

Under Article X, Section 18 of the Florida Constitution (as amended in 1998), dispositions of state-owned conservation lands are restricted to those lands "no longer needed for conservation purposes." If the proposed parkway/bridge construction activities necessitate right-of-way expansion, the FDOT will need to request that the Board of Trustees of the Internal Improvement Trust Fund determine whether the subject properties are no longer needed for conservation purposes. This requirement must be met before the conveyance of these lands can proceed.

In addition, please be advised that proposals to utilize state conservation lands may be required to meet the guidelines of the state's linear facility policy, POLICY Use of Natural Resource Lands by Linear Facilities As Approved By Board of Trustees of the Internal Improvement Trust Fund on January 23, 1996.

**Where Comment is Addressed in Document:** Wetlands, uplands, and submerged aquatic habitats are addressed in the technical report titled *Endangered Species Biological Assessment Report* and DEIS Section 4.3.14 (Wildlife and Habitat) and DEIS Section 5.3.14 (Wildlife and Habitat); the *Endangered Species Biological Assessment Report* evaluates existing and proposed conditions for federally and State listed plant and animal species; the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); avoidance, minimization and mitigation measures (including action by the Board of Trustees) are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); potential permitting requirements are addressed in DEIS Section 1.6 (List of Other Government Actions Required).

### iii. Section 4(f) Potential

#### a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

The EST GIS analysis results present the following protected 4(f) resources within the 100-foot project buffer: the North Fork St. Lucie River Aquatic Preserve, the North Fork St. Lucie River Canoe Trail, the Savannas Preserve State Park, and a greenways ecological priority linkage. The 100-foot project buffer also contains one cultural resource group; it is unknown at the time whether this cultural resource is eligible for listing in the National Register of Historic Places.

Due to the significance of the noted features, a Section 4(f) Determination of Applicability will be required. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Section 4(f) Potential issue for this alternative. The final design for this alignment will avoid or minimize impacts to these features to the greatest extent practicable, and appropriate mitigation will be provided for unavoidable impacts.

**Commitments and Responses:**

A Section 4(f) Determination of Applicability will be required for this project.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

#### b. Federal Highway Administration

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

**Within 100' buffer:**

- One historical resource group (NRHP eligibility unknown). CRAS may identify other historical resources which may be NRHP eligible.
- Savannas Preserve State Park.
- Paddling Trails.
- Greenways Ecological Priority Linkages.
- City of Pt. St. Lucie forest, park, and recreation areas.
- Comprehensive Everglades Restoration Plan Project.

**Comments on Effects to Resources:**

- Public parks, recreation areas, wildlife and waterfowl reserves, and significant public or private historical resources may be 4(f) resources.
- A 4(f) Determination of Applicability should be done for this alternative.

**Where Comment is Addressed in Document:** The North Fork St. Lucie River Aquatic Preserve, Savannas Preserve State Park, and Kiwanis Park have been determined to be Section 4(f) Resources. A Section 4(f) Evaluation is contained in the DEIS in Section 6.0 (Section 4(f) Evaluation).

### C. Community

#### i. Aesthetics

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

Based on agency comments, this alignment is not anticipated to have major impacts on community aesthetics; the project is likely to be considered compatible with community aesthetic values due to the future provision of medians, sidewalks, bicycle lanes, and landscaping. It should be noted, however, that increased levels of noise, traffic, and vibrations (generated as a result of the project) may adversely affect the

residential uses located in the project area. The project also has the potential to alter the view shed of the St. Lucie River from the surrounding area.

Based on the foregoing, a Summary DOE of Moderate has been assigned to the Aesthetics issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to noise sensitive areas and overall community aesthetics.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

b. Federal Highway Administration

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

Single family residences occupy 60% of acreage within 200 ft. buffer.

**Comments on Effects to Resources:**

Alteration of view shed.

**Where Comment is Addressed in Document:** Aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic).

c. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The majority of existing land uses within the 500-foot project buffer are residential: west of the Saint Lucie River all single-family homes and east of the River one mobile home community. With such a significant amount of residential land in the project vicinity, corridor aesthetics will be a major concern to the surrounding community.

There are no surgery centers or assisted living facilities in the 100-foot project buffer, which suggests that noise and vibration related impacts may not be of significant concern.

**Comments on Effects to Resources:**

The project is likely to be considered compatible with community aesthetic values due to the provision of medians, sidewalks, bicycle lanes, and landscaping. However, special consideration should be made regarding the compatibility of this project with the view shed of the Saint Lucie River from the surrounding area.

Residential development in the vicinity of the project may be adversely affected by the increase in noise, traffic, and vibrations generated by the increase in vehicular traffic expected upon completion of the project. Special consideration should be made to minimize these adverse effects to the residential population located within the project impact area.

The project sponsor has held numerous community meetings and should continue to solicit input from community members and businesses in the vicinity on potential project effects related to corridor aesthetics as well as potential noise and vibration related impacts.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); aesthetics are addressed in DEIS Section 4.3.2 (Visual and Aesthetic) and DEIS Section 5.3.2 (Visual and Aesthetic); noise effects are addressed in the technical report titled *Noise Report* and in DEIS Section 4.3.4 (Noise) and DEIS Section 5.3.4 (Noise).

ii. Economic

a. Coordinator – FDOT District 4

**Degree of Effect:** 2 Minimal

**Comments:**

According to agency comments, this project has the potential to impact the St. Lucie County tax base by removing properties (for project right-of-way purposes) from the tax roll. In addition, local businesses may be impacted during project construction due to the temporary re-routing of traffic and the disruption of traffic flow. It should be noted, however, that the number of businesses to be impacted would be small; also, improved accessibility will likely have a positive effect on the value of the remaining land leading to a possible increase in the tax base.

Based on the foregoing, a Summary DOE of Minimal has been assigned to the Economic issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to residents and businesses during the project construction phase.

**Where Comment is Addressed in Document:** Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The predominant land use in the project area is low-density residential. According to the ETDM analysis, within the 100-foot project buffer, approximately 28 acres (59 percent of project buffer land area) is devoted to single-family homes. Also within the 100-foot buffer is 2+ acres of mobile home land use (five percent of project buffer land area).

Similar to the 100-foot project buffer, the 500-foot buffer consists of predominately single-family residential land uses. In addition, within the 500-foot buffer, there are twelve acres identified as other light industrial use and 3.5 acres identified as shopping center use. Also within the 500-foot buffer is a variety of low density community facilities such as small parks, an elementary school, and cultural centers not found within the 100-foot buffer.

**Comments on Effects to Resources:**

Due to the presence of developed residential and commercial land uses near the project, properties will need to be acquired for the roadway and related drainage uses. Alternative 5 would require the acquisition of 93 developed residential lots, 51 undeveloped residential lots, one commercial developed lot and one commercial undeveloped lot. Removing these properties from the tax rolls would impact the County's tax base. Improved accessibility would likely have a positive effect on the value of the remaining land, leading to a possible increase in the tax base.

In addition to acquisition impacts, the construction of the project could have a significant impact on local businesses due to temporary re-routing of traffic and disruption of traffic flow. These impacts could lead to lost business revenue. However, the number of businesses impacted would be relatively small. Special consideration should be given to mitigate any negative impacts of the projects construction phase.

**Where Comment is Addressed in Document:** Sociocultural effects (including economic effects) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.2 (Economic Evaluation) and DEIS Section 5.1.1.2 (Economic Impacts).

iii. Land Use

a. Coordinator – FDOT District 4

**Degree of Effect:** 3 Moderate

**Comments:**

While this project is compatible with local growth management policies and land use/transportation plans, there is potential for the project to increase population concentration and density within the City of Port St. Lucie's Coastal High Hazard Area. The project may also trigger development in undeveloped areas of the county. For these reasons, a Summary DOE of Moderate has been assigned to the Land Use issue for this alternative.

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3. (Land Use Impacts).

b. St. Lucie TPO

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The developable land within the immediate impact area (500-foot buffer) of this project is mostly built up with single-family residential west of the Saint Lucie River and a mobile home community and commercial uses east of the River. Significant acreage in natural habitat borders the Saint Lucie River on both sides.

**Comments on Effects to Resources:**

The proposed project is not expected to alter the current development pattern taking place in the vicinity of the project. However, since additional or more intensive development is generally associated with capacity improvements, the project could indirectly stimulate the development of undeveloped properties in the project vicinity.

**Where Comment is Addressed in Document:** Land use changes are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

c. FL Department of Community Affairs

**Degree of Effect:** 3 Moderate

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The

majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor. The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan.

If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts).

#### iv. Mobility

##### a. Coordinator – FDOT District 4

**Degree of Effect:** 1 Enhanced

**Comments:**

According to agency comments, this alignment will serve as a critical transportation route during emergency evacuation periods. The project will likely enhance evacuation capacity and traffic circulation on U.S. 1 and I-95 (two state designated hurricane evacuation routes) and improve access to the regional road network. The project is also anticipated to improve mobility in the area for automobiles and transit service as the additional capacity will alleviate traffic congestion on parallel corridors.

In addition, the project is anticipated to attract recreational users with the inclusion of enhanced landscaping, bicycle lanes, and a multi-use trail. Based on the foregoing, a Summary DOE of Enhanced has been assigned to the Mobility issue for this alternative.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

##### b. St. Lucie TPO

**Degree of Effect:** 1 Enhanced

**Identified Resources and Level of Importance:**

The project area includes U.S. Highway 1, a north-south thoroughfare on the state highway system. Also included in the project area is Floresta Drive, a local north-south thoroughfare. The majority of streets in the project area serve local, residential needs. Within the one-mile buffer of the project site, there is an elementary school, various religious facilities, social services facilities, assisted living facilities, and health care facilities. There are no facilities of these types within the 500-foot buffer. A transit route for the Treasure Coast Connector bus runs along U.S. 1 from St. Lucie County into Martin County. A transit stop for this bus is located adjacent to the La Buona Vita mobile home community.

**Comments on Effects to Resources:**

The project will likely improve mobility for automobiles and transit service in the area. The additional capacity generated by the project should alleviate the traffic congestion experienced on parallel corridors (Prima Vista Boulevard and Port Saint Lucie Boulevard). By connecting U.S. Highway 1 with Interstate 95, the project would improve access to the regional road network. I-95 is part of the Strategic Intermodal System (SIS), and provides access to local businesses as well as to freight activity centers located in south and central Florida. Both Highway U.S. 1 and I-95 are hurricane evacuation routes, and the Crosstown Parkway Extension would enhance evacuation capacity and traffic circulation on these routes. Because the Crosstown Parkway Extension will include enhanced landscaping, bicycle lanes, and a multiuse trail, the Parkway itself will serve as an attraction to recreational users.

Special consideration should be given to the age of recreational users of the project and their transportation safety needs. To address any transit concerns, the project sponsor should work with the public transportation provider to provide for safe and efficient transit services and access to transit stops, with special emphasis on the transportation disadvantaged population.

**Where Comment is Addressed in Document:** Mobility is addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.4 (Transit and Mobility) and Section 5.1.1.4 (Mobility).

v. Relocation

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely impact 93 developed residential lots and one developed commercial lot. As a result, approximately 230 persons will be relocated. The project may also adversely impact services that support the community. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Relocation issue for this alternative.

As more detailed project information on right-of-way needs becomes available, it is recommended that further assessment of relocation effects be conducted. In addition, the FDOT District 4 will coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

b. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

The predominant land use in the project area is low-density residential. According to the ETDM analysis, within the 100-foot project buffer, approximately 28 acres (59 percent of project buffer land area) is devoted to single-family homes. Also within the 100-foot buffer is 2+ acres of mobile home land use (five percent of project buffer land area).

Similar to the 100-foot buffer, the 500-foot project buffer consists of predominately single-family residential land uses. However, within the 500-foot buffer, there are twelve acres identified as other light industrial use and 3.5 acres identified as shopping center use. Also within the 500-foot buffer is a variety of low-density community facilities such as small parks, an elementary school, and cultural centers not found within the 100-foot buffer.

**Comments on Effects to Resources:**

Although Alternative 5 would have no direct impacts on community facility land uses, the alternative is expected to result in relocation impacts to 93 developed residential lots and one commercial developed lot. Using an estimated 2.5 persons per household, that would mean approximately 230 persons. Therefore, a significant impact would occur on community services resources that provide assistance to relocated individuals.

As more detailed project information on right-of-way needs becomes available, it is recommended that further assessment of relocation effects be conducted.

**Where Comment is Addressed in Document:** Relocation is addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

vi. Social

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

According to agency comments, the project will likely have substantial impacts on social cohesion as it will bisect the community; the project will introduce a six-lane thoroughfare into a residential neighborhood. Residents and businesses of the area could adversely be affected by noise, vibrations, air quality issues, increased volumes of construction vehicles, and the rerouting of traffic during project construction. Based on the foregoing, a Summary DOE of Substantial has been assigned to the Social issue for this alternative.

Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to residents and businesses during the project construction phase. The FDOT District 4 will also coordinate with the St. Lucie TPO to conduct public outreach.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

b. FL Department of Community Affairs

**Degree of Effect:** 2 Minimal

**Identified Resources and Level of Importance:**

The DCA Department staff has discussed the effects on roadway level of service standards with Florida Department of Transportation District 4 staff because the roadway crosses a portion of the North Fork of the St. Lucie River defined as a Coastal Emergency Management Flood Area. District staff has indicated that potential changes to level of service standards resulting from this project have not been determined. Coastal High Hazard Area Policy 5.1.4.2 of the City of Port St. Lucie Comprehensive Plan states that new roads or improvements in the coastal planning area should be completed in order to increase the number of traffic lanes for hurricane evacuation. The majority of the Coastal High Hazard Area served by the project is fully developed. Therefore, staff has not identified issues related to increasing population concentration within the Coastal High Hazard Area.

Of the six alternative corridors have been identified for evaluation, one of these project corridors (Corridor Alternative 1 (1C) West Virginia Drive/Village Green Drive) is consistent with the currently adopted City of Port St. Lucie Comprehensive Plan, since the project is shown on Map 7 of the 2020 Port St. Lucie Future Transportation Map. The Crosstown Parkway Extension Project was previously reviewed in September 2006 by the Department in order to consider four alternative corridors through the ETDM program. One of the corridors also reviewed at that time was the West Virginia Drive/Village Green Drive corridor.

The additional project corridors identified during the 2006 ETDM review and the current Advance Notification review are inconsistent because they are not identified within the City of Port St. Lucie Comprehensive Plan. If alternative project corridors other than the West Virginia Drive/Village Green Drive are selected in order to extend the Crosstown Parkway, those project alternatives should not be advanced into the Florida Department of Transportation's Five Year Work Program until the City of Port St. Lucie comprehensive plan is amended to reflect the proposed roadway modification.

**Where Comment is Addressed in Document:** Land use changes (including the Coastal High Hazard Policy) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1.2 (Existing Land Uses) and DEIS Section 5.1.1.3 (Land Use Impacts); Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation).

c. St. Lucie TPO

**Degree of Effect:** 4 Substantial

**Identified Resources and Level of Importance:**

Low-density residential land uses are found within the 100-foot project buffer, including La Buona Vita, a 55+ mobile home community. According to the ETDM GIS analysis tool, based on the 2000 U.S. Census, there were 9,095 persons 65 years of age or older residing in the one-mile project buffer. This represents 48 percent of the project area population. The high percentage of elderly persons is due to the presence of La Buona Vita.

Within the area immediately surrounding the project (up to one mile away), ETDM analysis identified one Census block as having a minority population greater than 40 percent. The minority population includes black, Hispanic, Asian, Native American and other races. Countywide, the percentage minority population is approximately 33 percent.

**Comments on Effects to Resources:**

During construction, increased volumes of construction vehicles, noise, vibration, potential air quality issues, and rerouting of traffic would have an impact on the residential and business populations, and particularly the La Buona Vita senior community.

Because the project involves the introduction of a six-lane thoroughfare into a single-family residential neighborhood, community bi-section will occur. Thus it appears the project would have a substantial impact on social cohesion within the community.

Emphasis should be placed on proactive public involvement to preserve as much as possible existing community ties and relationships. Additional study is recommended to assess both direct and indirect impacts to businesses and residents. Special consideration should be given to residents living in the immediate vicinity of the project in order to address community needs and concerns, especially those related to the transportation disadvantaged population.

**Where Comment is Addressed in Document:** Sociocultural Effects (including Public Involvement) are addressed in the technical report titled *Sociocultural Effects Evaluation Report* and DEIS Section 4.1.1 (Sociocultural Effects Evaluation) and DEIS Section 5.1.1 (Sociocultural Effects Evaluation); relocations are addressed in DEIS Section 5.1.1.5 (Relocation). Relocation and cohesion is also discussed by alternative in DEIS Section 3.3.9 (Build Alternatives).

D. Secondary and Cumulative

i. Secondary and Cumulative Effects

a. Coordinator – FDOT District 4

**Degree of Effect:** 4 Substantial

**Comments:**

Based on agency comments, a Summary DOE of Substantial has been assigned to the Secondary and Cumulative Effects issue for this alternative. Recommendations from the PD&E Study will be formed to avoid, minimize, or mitigate impacts to identify cultural and natural resources within the project area to the greatest extent practicable.

**Where Comment is Addressed in Document:** Avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation); cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).

b. FL Department of Environmental Protection

**Degree of Effect:** 4 Substantial

**Comments on Effects:**

The North Fork St. Lucie Aquatic Preserve (NFSLAP) and the Savannas Preserve State Park (SPSP) - Class III Waters and Outstanding Florida Waters - watershed, wetlands, waterbodies, and wildlife habitat in the vicinity of the parkway. All six alternatives have the potential to facilitate development in environmentally sensitive areas, further exacerbating non-point source stormwater runoff, is of particular concern to the Department and other state resource agencies.

Impacts to environmentally sensitive areas and cultural features of the community, which could be breached by development of the transportation corridor between West Virginia Drive and I-95 and the Florida Turnpike, should be analyzed to avoid adverse impacts to the quantity, quality, and flow of groundwater and surface waters. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of the adjacent wetlands, floodplains, and waterbodies.

**Recommended Avoidance, Minimization, and Mitigation Measures:**

Staff believes that the FDOT should prepare an environmental impact statement (EIS) on the entire transportation corridor proposed or contemplated between I-95 and Hutchinson Island, in accordance with the Federal Highway Administration's National Environmental Policy Act (NEPA) requirements. The EIS should cover the purpose and need for the project, logical termini of all proposed or contemplated corridor segments, and the other items described in the Recommendations section of the September 23, 2003, DEP Memorandum (see pages 9-10). The scope of the EIS should include all improvements proposed or contemplated along the West Virginia Drive - Walton Road corridor between I-95 and Hutchinson Island. An evaluation of the primary, secondary and cumulative impacts of transportation improvements through the NFSLAP, SPSP, Indian River Lagoon Aquatic Preserve, and surrounding communities is necessary.

The EIS should consider secondary and cumulative impacts that may result from additional development on Hutchinson Island if the proposed bridge is built. Items that should be evaluated include: stormwater runoff from increased impervious surfaces, impacts to listed species resulting from increased development and human activity on the island, and conflicts with the Coastal Barrier Resource Act. The EIS should also assess potential impacts to neighborhoods within the City of Port St. Lucie that may be affected by increased traffic resulting from the proposed re-routing of I-95 and Turnpike traffic through the City.

The applicant must provide an evaluation of consistency with the Florida Coastal Management Program, including an analysis explaining how the proposed bridge and other projects in the I-95-to-Hutchinson Island corridor comply with state statutes and rules, particularly Chapters 253, 258, 370, 373, 380, and 403, F.S.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts); the extension of Walton Road to Hutchinson Island (Walton Road Bridge) is addressed in DEIS Section 5.4.1.2 (Cumulative Impacts, Roadway Actions); water quality and quantity are addressed in the technical reports titled *Pond Siting Report*, *Preliminary Drainage Report*, and *Location Hydraulic Report* and in DEIS Section 4.3.7 (Water Quality) and DEIS Section 5.3.7 (Water Quality); coastal zone consistency is addressed in DEIS Section 4.3.12 (Coastal Zone Consistency) and DEIS Section 5.3.12 Coastal Zone Consistency); avoidance, minimization and mitigation measures are addressed in DEIS Section 7.0 (Avoidance, Minimization and Conceptual Compensatory Mitigation).

c. FL Department of State

**Degree of Effect:** 3 Moderate

**Comments on Effects:**

Until a current cultural resource assessment survey is completed, it is difficult to determine the potential for secondary and cumulative impacts to significant resources. A systematic survey will identify those resources that may be vulnerable to secondary and cumulative impacts.

**Where Comment is Addressed in Document:** Cumulative impacts are addressed in DEIS Section 5.4 (Cumulative Impacts).